HOSPITAL ABSTRACTS

A MONTHLY SURVEY OF WORLD LITERATURE
PREPARED BY THE DEPARTMENT OF HEALTH
AND SOCIAL SECURITY

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CONTENTS

	page
Hospitals in general	237
Hospitals in other countries	237
Planning, design and construction	238
Building: tendering, etc.	238
Construction methods and building materials	239
Hospital design	239
Design of individual general hospitals	239
Extensions and reconstructions	240
Design of special departments	240
Design of special hospitals or units	241
Engineering services	243
Installations in general	243
Artificial lighting	243
Communication systems	243
Transport in general	244
Ventilation and air-conditioning	245
Maintenance of buildings and equipment	245
Equipment, fittings, furniture	246
Beds, cots, etc.	246
Trolleys, stretchers, etc.	246
Staff generally	246
Staff complements	246
Recruitment	246
Conditions of service	246
Staff management	246
Staff training	247
Staff welfare	247
Special classes of staff	248
Administrative and clerical staff	248
Medical staff	248
Nursing staff	249
Ancillary staff	254
Organization and administration	254
Economics of hospital management	255
Running costs	256
Bed occupancy, economic use of beds	256
Appointment systems, waiting lists	257
Data processing	257
Organization and methods, work study	257
Medical records	257
Hospital statistics	258
Hospital accreditation and similar schemes	258
Legal aspects of hospital administration	258
Finance and accounting	259
Finance	259
Hospital accounting	260
Supplies and stores	260
Supplies	260
Purchasing	261
Catering, dietetics, kitchens	261
Hospital catering	261
Dietetics in the hospital	262
Laundries and linen service	263
Laundries	263
Hospital linen and textiles	263
Hygiene in the hospital	263
Hospital infections	264
Sources of infection	266
Prevention and control	266
Hygiene in the operating theatre	268
Sterilization	269
Safety measures	270
Fires and fire prevention	270
Planning for mass emergencies	270
The patient	271
Admission and reception	271
Welfare of the patient	271
Voluntary service, voluntary workers	272
The general practitioner and his patients	272
Transport of patients	273
Hospital care	273
Discharge of patients	274
Home care, after-care	274
Special departments	275
Wards	275
Operating suites	275
Anaesthesia	276
Pharmacy	276
Laboratories	279
Diagnostic X-ray department	279
Radioisotope department	280
Rehabilitation	280
Physiotherapy department	280
Departments for special therapy	281
Intensive care units	281
Special hospitals and units	282
Out-patient	282
Casualty and accident	283
Day hospitals	284
Infectious diseases and isolation	284
Children	285
Geriatrics and long-stay	286
Cardiology	288
Urology	288
Surgery	288
Maternity	288
Dermatology	288
Dentistry	288
Psychiatry	289
Author index	v
Addresses of publications	vi

HOSPITAL ABSTRACTS

Vol. 17 May 1977 No. 5

HOSPITALS IN GENERAL

611. OHLER. Entwicklung und Begrenzung der ärztlichen und pflegerischen Zielsetzung von Krankenhäusern. **[Development and limitation of hospital medical and nursing objectives.]** *Krankenhaus Umschau*, Kulmbach, 1977, Jan., vol. 46, no. 1, pp. 11-14.

While there can be no limits to developments in medicine or to the objectives of hospitals there are three factors which limit the effectiveness of medical care. These are: the biological and medical boundaries of human life; the knowledge and ability of doctors combined with the adequacy of the equipment at their disposal; and the collaboration of the patient. If costs are to be reduced without affecting the quality of care there must be more supra-regional planning to ensure rational use of beds and equipment and a suitable spread of specialist care. There must also be education of the public on matters of health policy so that the social security system is not overtaxed by unreasonable demands. Neither the individual nor the community can live beyond their means. In the last resort everybody has to pay—often the very people most in need of social security, the sick and the elderly.

HOSPITALS IN OTHER COUNTRIES

612. WEILL, E. and others. Place de l'hôpital public dans le système de santé. **[The place of the public hospital in the health system.]** *Médecine Hospitalière*, Nevers, 1976, Dec., vol. 12, no. 10, pp. 323-326, 329.

After briefly outlining the present situation of the public hospital in France, the authors suggest improvements. Further efforts must be made to create a more welcoming environment for the patient, more nursing staff must be found, and better relations established between the hospital and local doctors. The greater use of day hospitals and domiciliary care is recommended and the authors suggest the construction of hotels within hospital grounds so that patients who live far away can be treated in the day hospital and stay at the hotel, with their relations if they wish. The financial benefits of such a scheme would be considerable. There is also an urgent need for more medium- and long-stay hospitals to ensure that the sophisticated equipment in the major hospitals is used fully.

613. NATIONAAL ZIEKENHUISINSTITUUT. Atlas van de intramurale gezondheidszorg. **[Hospital atlas.]** Utrecht, Nationaal Ziekenhuisinstituut, 1975, 199pp.

This publication presents an inventory of Dutch hospitals, psychiatric institutions and nursing homes in map and tabular form. In addition it provides information about: the regional dispersion of these facilities, based on 24 regions showing a well-balanced range of the different types of care; and the co-operation between the institutions in these regions.

PLANNING, DESIGN AND CONSTRUCTION

614. DECKER, C. Architektur und Einrichtung von Krankenhäusern in Südamerika. **[Hospital architecture and equipment in South America: report on a Krankenhaus Umschau study tour of Peru, Bolivia and Brazil.]** *Krankenhaus Umschau*, Kulmbach, 1977, Jan., vol. 46, no. 1, pp. 29-33.

This is a report on a study tour of Peru, Bolivia and Brazil. A brief account is given of the health services in each country and there are short illustrated descriptions of particular hospitals visited. These include the following: the Anglo-American Hospital, Lima; the No. 2 Central Hospital, Lima; the Regional Hospital, Cuzco; the Clinica Alemania in Bolivia; the Clinica Santa Isabel in Bolivia; the Methodist Hospital in Bolivia; the University Hospital, São Paulo; the Albert Einstein Hospital, São Paulo; the Armed Forces Hospital, Brasilia; and the Lagoa Hospital, Rio de Janeiro.

615. DANES, M., MANO, P. and CLÉMENT, J.-M. Le groupement interhospitalier régional d'Aquitaine, deux ans d'existence. **[Regional hospital groups in Aquitaine, after two years.]** *Techniques Hospitalières*, Le Kremlin Bicêtre, 1977, Jan., vol. 32, no. 376, pp. 63-69.

The Aquitaine regional interhospital group council, representing 46 hospitals, has 30 members and meets twice yearly. Its objectives are to ensure the even distribution of beds and equipment throughout the 15 sectors in the region (illustrated with a map), to keep its members up to date with developments in hospital policy and equipment, and to plan for future requirements. The authors describe how the council has approached its task during the first two years of its existence.

BUILDING: TENDERING, ETC.

616. TOORNEND, R. A. Bouworganisatie bij de realistie van een nieuw ziekenhuis. **[Building organization in the construction of a new hospital.]** *Ziekenhuis*, Utrecht, 1977, Jan. 5, vol. 7, no. 1, pp. 20-22.

To obtain maximum co-operation between all participants in the construction of a new hospital requires a clear-cut phasing of the building process, objective information about the results of each phase and a well-organized hierarchy and communication system. The commission for a building project can be approached in three different forms: (i) the traditional form, hitherto most commonly used, whereby commissions are given to designers and advisers, followed by contracts to builders, installation firms, etc.; (ii) a building team, whereby a main contractor is included with designers and advisers at an early stage; and (iii) a turnkey project, whereby all responsibility is handed over to one authority. Aspects discussed include: the size of projects; execution; role of preparatory team; management of the building team; programme of requirements for turnkey projects; hierarchy between various function groups (commissioners, research, design, management, execution); role and composition of various consultation groups on management and decisions; and co-ordination and control. The paper includes three diagrams.

CONSTRUCTION METHODS AND BUILDING MATERIALS

See Abstract No. 617

HOSPITAL DESIGN

See also Abstract No. 690

617. MEIN, P. and JORGENSEN, T. **Design for medical buildings: a manual for the planning and building of health care facilities under conditions of limited resources.** Nairobi, University of Nairobi Housing Research and Development Unit, 1975, [iv], 146pp. £3.50

This manual contains design, construction and cost guidelines for the building and extension or improvement of hospitals and other health facilities in developing countries. It concentrates on the rural hospital, which is a reasonably defined and familiar element in most health systems and which exemplifies many of the functions found in buildings both higher and lower in the health care hierarchy. Plans and diagrams are included.

DESIGN OF INDIVIDUAL GENERAL HOSPITALS

618. **St. Thomas' Hospital: North Wing.** *Hospital Development*, London, 1977, Jan./Feb., vol. 5, no. 1, pp. 12-14.

The new north wing of St. Thomas' Hospital, London, is one of the most advanced patient care and teaching units in the world. The background to the design and building is outlined together with the problems of erecting the building on the relatively small and restricted site. The North Wing provides a 630-bed ward block and a treatment block which houses out-patient departments, laboratory services, operating theatres, administrative departments and the Rayne Institute. There are very heavy floor loadings in the wing in view of the requirements for both blocks to house specialist equipment. The air-conditioning system is outlined, together with the electrical system and piped services. Communication has been of great importance; in each ward there is a patient-to-nurse call system, and there are over 1,500 telephone extensions in the blocks. The design of the wing is discussed, together with the facilities provided in the treatment block. The total cost of the development is expected to be in the order of £21 million.

619. LALANDE, A. C. La clinique du Colombier à Limoges. **[Colombier Clinic, Limoges.]** *Hospitalisation Nouvelle*, Paris, 1976, Dec., no. 55, pp. 19-25.

Commissioned by local doctors and designed by Guy Despont, the Colombier Clinic has 120 beds, of which 100 are for surgery, 10 for obstetrics, and 10 for medical cases. The wide base of the building houses six operating theatres plus a small theatre for minor out-patient surgery. There are facilities for maxillo-facial, ophthalmic, plastic, and neurosurgery, as well as for general surgery. The physiotherapy department has several hydrotherapy pools; there is also a diagnostic X-ray department. The wards (70 single and 25 double rooms) are in a five-storey tower above the base. For surgery the bed occupancy rate is 99 per cent, and the average stay lasts 7.27 days. Eight photographs, but no plans are included.

620. Kantonsspital Münsterlingen, CH. **[Münsterlingen Canton Hospital, Switzerland.]** *Baumeister*, München, 1976, vol. 73, no. 9, pp. 734-737.

The rectangular building at Münsterlingen, Switzerland, with central courtyard, built in 1714 as a monastery and later used as a lunatic asylum has been restored, modernized and extended to become the 176-bed Münsterlingen Hospital. The original richly decorated doors, vaulting and stuccoed ceilings have been carefully restored. Parts of the original block have been enlarged to form kitchens and pharmacy, and a new treatment block, linked to the main block, as well as a new ward block have been built. There are outline floor plans of the main block as it was and as it is now, an elevation, and six photographs.

621. **Project close-up: Rashid Hospital, Dubai.** *Building*, London, 1977, Jan. 21, vol. 232, no. 3, pp. 107-110, 113-114.

The 400-bed Rashid Hospital, Dubai, was designed by a British architect, built by a British contractor and completed in 1973. The hospital is a simple two-storey structure with a reinforced concrete frame, blockwork walls and a steel roof. The window area has been reduced to keep out the sun and minimize the load on the air-conditioning. Most windows face north or south, since it is the east and west facades which suffer most exposure to the sun. The air-conditioning system is of the chilled water type using 100 per cent fresh air. Plans of both floors and 11 photographs are included.

EXTENSIONS AND RECONSTRUCTIONS

622. WHITEHEAD, C. and others. **The aging psychiatric hospital: an approach to humanistic redesign.** *Hospital and Community Psychiatry*, Washington, 1976, Nov., vol. 27, no. 11, pp. 781-788.

Since funds for the construction of new treatment facilities in the United States are now scarce, hospital administrators are faced with the problem of redesigning old wards to meet the current needs of patients. The development of the roles of the staff, the institution, and the physical environment are discussed. The need for integrating modern therapeutic concepts, patient requirements and pragmatic budgetary limitations into the design is considered. Current theory on the effect of physical environment on behaviour patterns is discussed together with the need for security. A redesign study of a psychiatric ward in a state hospital is discussed with the categories of need and the concept of flexibility. The hierachy of spatial uses has also been incorporated into the design. The concepts used combine a consumer-oriented approach within the pragmatic considerations of budget limitations and administrative realities. These concepts may be adapted for use in other institutions as means of improving the environment.

DESIGN OF SPECIAL DEPARTMENTS

See also Abstract No. 734 (Departments for special therapy)

623. Anforderungen an eine zeitgemässe Operationsabteilung. **[Requirements for a modern operating theatre.]** *Veska*, Aarau, 1977, Jan., vol. 41, no. 41, pp. 31-34.

While operating techniques in Swiss hospitals are unexceptionable the same cannot

always be said for the equipment, structural conditions and functioning of operating suites. This paper lists the main deficiencies and then sets out what should be done to put them right. These deficiencies are: lack of proper ancillary rooms; faulty hygiene; equipment which, both qualitatively and quantatively, does not meet modern requirements; functional and organizational deficiencies; and inadequate supply arrangements. Special emphasis is laid on the need for a proper airlock system with separation of the pre-operative, operative, and post-operative zones. There is a diagram showing work flow routes and a sketch plan of an operating suite.

624. HARDAWAY, R. T. **Design and construction of a dialysis facility.** *Dialysis & Transplantation*, Sherman Oaks, Calif., 1977, Dec./Jan., vol. 6, no. 1, pp. 66, 69.

The process of designing and building a haemodialysis unit is an unpredictable and complicated logistical operation. The development of a typical 20-bed out-patient unit is described in stages. The problems common to new buildings and remodelled old buildings are outlined, together with construction methods. Development of a 20-bed unit will probably take four to five months if it is remodelled and five to eight months if it is a new building, assuming it is a unit of 6,000 square feet. The total length of time from the beginning of architectural design to the first dialysis treatment can take anything from eight to 14 months.

DESIGN OF SPECIAL HOSPITALS OR UNITS

625. **Emergency department's design details meet diverse needs of patients and staff.** *Hospitals*, Chicago, 1976, Dec. 16, vol. 50, no. 24, pp. 30, 32.

The new casualty department at Alexian Brothers Hospital, San José, Calif., was designed to meet the needs of the increasing numbers of patients who use the department's services. The design for the new department specified 24 treatment rooms; private and ward treatment areas; specialty areas; separate ambulance entrance; private room for families and police; surgical lighting; showers; staff sitting-room; and sleeping accommodation for doctors. The circular central nurse's station enables staff to supervise 20 beds. The new department has a surgical section, a gynaecology treatment room, a cast room, examination rooms and an eye treatment room. The project was completed in June 1975.

626. IZUMI, K. **Perceptual factors in the design of environments for the mentally ill.** *Hospital and Community Psychiatry*, Washington, 1976, Nov., vol. 27, no. 11, pp. 802-806.

Designers of special environments for psychiatric patients must be aware that irrelevant aspects of design can have traumatic effects upon patients. Since patients have increased sensitivity to sensory stimuli and lessened ability to filter out or adjust to the effects of such stimuli, they are more likely to be affected by their surroundings than healthier people and their social relationships are correspondingly affected. Various types of perceptual distortions are discussed: self-perception; perception of others; space perception; and time perception. Designers should aim to create an unambiguous, coherent and unobtrusive environment. Specific design problems are outlined including the use of mirrors and reflecting surfaces, patterns and lighting, smells and colour.

627. MEANS, G. C. and ACKERMAN, R. E. **South Carolina's village system.** *Hospital and Community Psychiatry*, Washington, 1976, Nov., vol. 27, no. 11, pp. 789-792.

The concept of South Carolina's village system is to offer a co-ordinated range of treatment and settings for psychiatric patients, matched to the patient's own problems and abilities. The village system will consist of, ultimately, four regional centres which will provide intensive psychiatric care in residential settings complete with all the supportive elements that comprise a town or a community. The first 304-bed centre will be opened in 1977. All patients will be admitted through their local psychiatric clinic; liaison staff will serve as links between the village and the patient's home environment. The architectural features of the village and individual design features are discussed, together with the concepts of care. Each lodge in the village will house three groups of 12 patients and contain living and dining areas. The design of the village promotes the maximum use of social skills that the patient already has and helps in the development of increasingly sophisticated skills.

628. ANDERSON, S. E., GOOD, L. R. and HURTIG, W. E. **Designing a mental health center to replace a county hospital.** *Hospital and Community Psychiatry*, Washington, 1976, Nov., vol. 27, no. 11, pp. 807-813.

An architectural team worked in close co-operation with a county building committee and the administrative staff of Wood County Hospital, Wis., to design a new active-treatment centre. The Norwood Mental Health Center, Marshfield, Wis., was built to replace Wood County Hospital, originally built in 1910 as part of Wisconsin's system of county psychiatric hospitals. The objectives of the new centre included changing the negative image of the hospital in the community, fostering close links between treatments and users, and encouraging in-patients to make the best use of various treatment areas. Planning was interrupted by a community-wide controversy over the site and the new centre was eventually built on a compromise site. The new building, a community mental health centre serving two counties, has an open, split-level design and is irregularly shaped offering 109 in-patient beds, and 35 places for day care. The design of the centre is outlined. An informal evaluation of the environment was made a year after the centre opened and the results analysed. A floor plan of the centre is included.

629. LEVY, E. **Designing environments for mentally retarded clients.** *Hospital and Community Psychiatry*, Washington, 1976, Nov., vol. 27, no. 11, pp. 793-796.

An environment that stimulates the auditory, visual and tactile senses increases appropriate behaviour among mentally handicapped patients and reinforces their learning capacities. Several low-cost design techniques for producing a more stimulating and less institutionalized atmosphere are outlined. Many of these design features have been used to change a room in the Mansfield Training School, Mansfield Depot, Conn., into a more homelike environment for blind, handicapped patients. Patients have become more independent and confident as a result of these environmental changes and rarely exhibit the bizarre behaviour patterns of the past. Staff are happier working in the new environment. The application of these design features to community housing and new state institutions is discussed.

ENGINEERING SERVICES

INSTALLATIONS IN GENERAL

630. ROUSÉ, M. Consommation en énergie des établissements de soins et de cure publics au cours de l'année 1973. **[Energy consumption in public health facilities in 1973.]** *Santé Sécurité Sociale Statistiques et Commentaires*, Paris, 1976, Sept./Oct., no. 5, pp. 29-54.

A brief commentary accompanies a series of five tables and four maps relating to energy consumption by the whole range of public hospitals from university to geriatric in each department in France in 1973. Fuel oil was the main source of energy (41.8 per cent). For purposes of comparison consumption of electricity, gas, oil, and coal was converted into kilo-thermal units. The majority of establishments used between 12.8 and 16.8 kilo-thermal units per bed per annum. Large hospitals with a high level of technical equipment used more electricity than other types of establishment.

ARTIFICIAL LIGHTING

631. GUGLIERMETTI, F. Illuminazione nelle sale chirurgiche. **[Operating theatre lighting.]** *Tecnica Ospedaliera*, Milano, 1976, Dec., vol. 6, no. 12, pp. 29-33.

A short survey of the problems of lighting in operating theatres is presented. The relationship between illumination and vision is discussed in terms of glare, reflection of light from surfaces, contrast, wall and ceiling colour, uniformity of illumination, and the heat produced by the light sources. The various types of lighting in current use are described and illustrated with five photographs and two diagrams.

COMMUNICATION SYSTEMS

632. SCRIMGER, J. **Telemedicine by satellite.** *Hospital Administration in Canada*, Don Mills, Ont., 1977, Jan., vol. 19, no. 1, pp. 26-27.

A five-month experiment at University Hospital, London, Ont., demonstrates that telemedicine by satellite could revolutionize health care in Canada's north. The two northern communities of Kashechewan and James Bay and Moose Factory Zone, Ont., are linked with University Hospital by the Communications Technology Satellite, which, unlike radio-telephone, is not subject to disruption by atmospheric disturbances. Transmission of clear, crisp ultrasound pictures is the rule not the exception. Psychiatric counselling and diagnostic radiology schemes are being carried out via the satellite. Video and audio transmissions are received from the north at University Hospital. Video transmissions are one-way only, but the audio-portion is bi-directional. University Hospital can only use the satellite every second day from 0800 to 1200 hours as time is at a premium. Other telemedicine experiments will be two-way television for the operation of and management of primary health care delivery in remote rural areas, and the provision of continuing education to doctors and allied health professionals working in remote areas. The advantages of satellite communications for telemedicine have been proved in the United States and are being demonstrated at University Hospital, Moose Factory Hospital and the nursing unit at Kashechewan.

TRANSPORT IN GENERAL

633. NEUHAUS, W. A. Wartung und Instandhaltung von Transportsystemen. **[Maintenance and preventive maintenance of transport systems.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1977, Jan., vol. 18, no. 1, pp. 38-40, 42-46.

In 1975 the number of automated internal transport systems in use in West German hospitals was 17; in addition 12 installations were under construction and 13 were at the planning stage. A study of 10 of the systems in use showed that the number of technical failures per day varied between one and 14 and the number of operational errors per day between 0.7 and five. Estimated cost of maintenance, expressed as a percentage of capital cost, varied between 1.4 and 4.6. In order to reduce maintenance costs it is essential that proper attention is paid to maintenance requirements at the planning stage and that the transport system fits in with the construction of the building and with other installations. This paper outlines with the aid of diagrams the main factors involved during the planning, installation and operating stages. Details are also given of the documentation and staff required.

634. OPPENAUER, E. Voraussetzungen für die Planung des Einsatzes von Transportsystemen in Krankenhäusern. **[Prerequisites for planning the installation of hospital transport systems.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1977, Jan., vol. 18, no. 1, pp. 29-34, 37-38.

This paper is mainly concerned with the details of the materials flow analysis which is an essential prerequisite for planning an automated internal transport system for a hospital. The successive steps in such an analysis are set out as follows: determining objectives, formulating tasks; organization of the materials flow study; structural plan; assessing the existing position; evaluating and criticizing data; summary and presentation of results; programme of measures; and planning and structure of materials flow. Information on the volume and quantities of goods and of the times at which they have to be transported is important for determining the layout of the system, speeds, container sizes, and conveyor lines and lift requirements. A list is given of 13 important indices which can be derived from the materials flow analysis: these include such items as total transport volume per patient day, transport time per patient day, volume of transport by nurses per patient day, etc.

635. SCHEID, W.-M. Entscheidungsfindung bei der Wahl von Transportsystemen für Krankenhäuser. **[Decision-making in the selection of hospital transport systems.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1977, Jan., vol. 18, no. 1, pp. 21-28.

This paper is concerned with the selection of criteria for determining and comparing the economic advantages and efficiency of internal transport systems for hospitals—both for comparing manual with automated systems and for comparing various automated systems with each other. The conclusion is that efficiency analysis (using simulation, preferably computer-based) which is limited to the relevant criteria and carried out by experts, can make a significant contribution to decision-making in this area. The paper included a chart showing the successive stages of an efficiency analysis and a checklist of criteria.

636. SCHEID, W.-M. Methodik der Planung von Transportsystemen für Krankenhäuser. [**Methodology of planning hospital transport systems.**] *Österreichische Krankenhaus-Zeitung*, Wien, 1977, Jan., vol. 18, no. 1, pp. 11-16, 19-20.

The successive stages in the planning of an internal transport system for a hospital are described in detail under main and sub-heads and illustrated with diagrams. The stages are as follows: determining objectives; system planning; layout planning; tendering and contracts; detail planning; construction planning; and commissioning.

VENTILATION AND AIR-CONDITIONING

See also Abstract Nos. 702-704

637. **Steam humidification proves best for research unit.** *Hospital Development*, London, 1977, Jan./Feb., vol. 5, no. 1, pp. 34, 36.

The humidification equipment specified for Northwick Park Hospital and Clinical Research Centre, Harrow, Middx., had to cover a wide range of conditions, from the natural comfort level of the general ward to the hot humid conditions maintained for tropical animals in the research establishment's animal house, in addition to the overall demand for absolute hygiene. Armstrong humidification equipment was at first installed in the main operating theatres and the maternity block, then progressively installed throughout the 20 plant rooms of the hospital and research establishment. The steam humidification plants are pneumatically controlled, the humidity being sensed in the duct following the after-heater. Steam for all humidifiers comes from a central power house equipped with five heavy fuel steam boilers. The system offers energy savings; air is not re-circulated except for the computer room and a central windowless area of the research unit.

638. SMITH, R. M. and RAE, A. **Thermal comfort of patients in hospital ward areas.** *Journal of Hygiene*, London, 1977, Feb., vol. 78, no. 1, pp. 17-26.

Comfort standards for patients are of prime importance in hospital ward areas; other users of ward areas are expected to adjust their dress to suit the conditions necessary for patient comfort. A study was carried out at the Building Services Research Unit Experimental Ward Unit at Hairmyres Hospital, East Kilbride, to identify the optimum steady state conditions for patient comfort. The ward is of a modern 'race track' design, air-conditioned with accommodation for 46 patients. A total of 615 interviews were completed on 209 different patients, and throughout the tests the air change rate and proportion of recirculated air were varied in accordance with the demands of concurrent work on odours. The results revealed a preference for an air temperature of between 21.5°C and 22°C and a relative humidity of between 30 per cent and 70 per cent where the air velocity was less than 0.1 m./s. and the mean radiant temperature was close to air temperature.

MAINTENANCE OF BUILDINGS AND EQUIPMENT

See Abstract No. 633

EQUIPMENT, FITTINGS, FURNITURE

BEDS, COTS, ETC.

639. GIBBS, J. R. **Net suspension beds for managing threatened and established pressure-sores.** *Lancet*, London, 1977, Jan. 22, vol. i, pp. 174-175.

A net suspension bed has been developed to help prevent or heal pressure sores. It enables a heavy patient to be turned easily by one attendant and reduces the risk of back pain in attendants. The bed is essentially a mesh hammock which may be used with an old round-tubular type of bedstead or the modern high-low models. The handles at the foot end of the poles are turned in opposite directions to raise or lower a patient or in the same direction to turn him. The advantages of the system are: (i) the mesh does not damage the skin; (ii) restriction of voluntary movement is limited to the pelvis; and (iii) the mesh encourages ventilation and prevents a build-up of heat and moisture. The system compares favourably with more expensive support systems. There are now more than 150 net suspension beds in use and some invalids are managed at home by relatives.

TROLLEYS, STRETCHERS, ETC.

640. BRITISH STANDARDS INSTITUTION. **Specification for hospital trolleys for instruments, dressings and for anaesthetists' use including angular trolleys.** (BS 4068: 1977) London, B.S.I., 1977, 4pp.

This British Standard specifies the basic requirements relating to materials, dimensions, construction and electrical safety precautions for instrument trolleys and dressings trolleys of four sizes and angular trolleys, with rectangular loose shelves. Plans are included.

STAFF GENERALLY

STAFF COMPLEMENTS

See Abstract No. 647

RECRUITMENT

See Abstract Nos. 645, 648, 661

CONDITIONS OF SERVICE

See Abstract No. 657

STAFF MANAGEMENT

See Abstract Nos. 649-651, 662, 719

STAFF TRAINING

See also Abstract Nos. 652-657, 750

641. BONNICI, B. and VIGNAU, Y. L'appréciation des besoins en formation permanente au Centre Hospitalier Régional et Universitaire de Bordeaux. **[Appreciation of in-service training needs at the Bordeaux Regional and University Hospital Centre.]** *Revue Hospitalière de France*, Paris, 1976, Dec., vol. 40, no. 296, pp. 1333-1347, 1349-1360.

Only 37 per cent of the staff of Bordeaux Regional and University Hospital completed a questionnaire circulated to all staff to discover how much and what kind of in-service training they required. Those most interested in in-service training were aged between 20 and 35 and were administrative, nursing or paramedical staff in that order. The majority desired further training in order to obtain further qualifications or promotion. The questionnaire is reproduced in full.

STAFF WELFARE

See also Abstract Nos. 658, 693, 701

642. BURRELL, C. J. and others. **Prevalence of antibody to hepatitis B surface antigen among staff in an Edinburgh hospital.** *Journal of Hygiene*, London, 1977, Feb., vol. 78, no. 1, pp. 57-68.

Antibody to hepatitis B surface antigen was detected by radio immunoprecipitation in 74 (5.5 per cent) of 1,336 staff members in the Royal Infirmary, Edinburgh, in 14 (2.9 per cent) of 480 volunteer blood donors in the area, and in 12 (6.1 per cent) of 197 pregnant women attending for the first time at the ante-natal clinic in the hospital. Rates of antibody prevalence rose with age in the sample of hospital staff and that of blood donors, particularly among males, however antibody prevalence declined with age in the ante-natal patients. There was no association between antibody prevalence and a history of clinical hepatitis, blood transfusion or recognized contact with cases of hepatitis. No prevalence of infection was seen in physicians, surgeons, the nursing staff or workers in clinical diagnostic laboratories, hospital administration or other areas although staff who had worked or were working in the haemodialysis unit had increased antibody prevalence which correlated with an outbreak of dialysis-associated hepatitis. The limitations to the survey are discussed. The results indicated that most infections were subclinical and that staff having recognized exposure within the hospital to patients with clinical hepatitis were protected by current measures of segregation. The findings support the conclusion that transmission of hepatitis B infection to staff in infectious disease hospitals is minimal.

643. PASSONI, M. La patologia da lavoro nell'ambiente ospedaliero—ambiente e rischio: nota seconda. **[Occupational disease in the hospital—environment and risks. Part 2.]** *Ospedale*, Torino, 1976, Nov.-Dec., vol. 29, nos. 11/12, pp. 301-307.

The author discusses the risks to hospital staff from irradiation, and outlines the clinical features of irradiation disease. He discusses the conflicting evidence on the

development of leukaemia as a result of exposure to small, frequent doses of irradiation. He shares the view that, if adequate protection is provided for radiology staff, there is no need to record the amount of radiation received every time. Over 12 years he has only encountered three cases of irradiation injury among one thousand such staff. Surveying the incidence of infectious diseases in hospital, he lists those departments in which the risk of infection is highest. Measures to minimize infection are hampered by continuous traffic in and out of the hospital. Poor laundering techniques, inadequate maintenance of air-conditioning systems, and food contamination are also implicated. The risk of contracting tuberculosis is slightly higher for the staff of a general hospital than for the population as a whole (1.6 compared to 1.4 per cent of all illnesses) and higher still in sanatorium staff (4.6 per cent).

SPECIAL CLASSES OF STAFF

ADMINISTRATIVE AND CLERICAL STAFF

See Abstract No. 718

MEDICAL STAFF

See also Abstract No. 750

644. Le médecin et l'hôpital. **[The doctor and the hospital.]** *Gestions Hospitalières*, Mantes, 1976, Dec., no. 161, pp. 977-1128.

This special issue contains 30 papers on the role and relationship of doctors with hospitals in France. The papers are in six groups: the institutional 'cadre'; medicine and politics; careers and status; work relations; the doctor and the patient; and a new dynamism, dealing with the development of new specialized services.

645. WEDEEN, M. M. **A physician recruitment plan that works.** *Trustee*, Chicago, 1976, Dec., vol. 29, no. 12, pp. 19-21.

Sewickley Valley Hospital, Pa., appointed a committee to study the hospitals' long-range needs and objectives and the findings revealed that half the doctors were due for retirement within 10 years, some specialties were not sufficiently covered, and there were few recent graduates on the medical staff. As part of the plan to attract new doctors a recruitment committee works in conjunction with administration to identify specific needs and to assist in the search for and screening of prospective doctors. The procedure for recruiting doctors is outlined, which although it may appear paternalistic, goes to great lengths not to step beyond the point where help is requested. The assistance provided for the new doctor includes: guaranteed first-year income for specialties in short supply; loans for the purchase of office equipment and fittings; assistance with salaries of staff; loans for house purchase; introduction to lawyers and insurance brokers; and engineering evaluations of sites. The advantages of such a system to the hospital are outlined.

646. HAVARD, J. D. J. **The legal responsibility of the anaesthetist.** *Anaesthesia*, London, 1977, Jan., vol. 32, no. 1, pp. 25-30.

The various ways in which an anaesthetist may come into contact with the process of the civil and criminal law are outlined including criminal responsibility for causing death, and aspects of civil responsibility. Comparisons are made between English law and that of other countries. The need for vigilance by professional bodies representing medical practitioners, in monitoring and making representations about proposed new laws is emphasized.

NURSING STAFF

See also Abstract Nos. 719, 742

647. BOAM, T. V. **A question of balance: tactics and strategy of nurse manpower planning.** *Nursing Times*, London, 1977, Jan. 6, vol. 73, no. 1, occasional papers, pp. 1-4; Jan. 13, vol. 73, no. 2, occasional papers, pp. 5-8; Jan. 20, vol. 73, no. 3, occasional papers, pp. 9-12.

Nurse manpower planning is a difficult activity partly because of the size of the nursing staff budget, but mainly because of the different levels of technical expertise required, and the large proportion of learners contained within the work force. The need to develop a scientific approach is discussed. The overall strategy of nurse manpower planning is considered with some of the formulae nurse planners are expected to use; those of the Working Party on the Revenue Consequences of Capital Schemes, Department of Health and Social Security minimum standards and British Geriatric Association. The deployment of resources and training are discussed in relation to the pattern of duty in operation at the hospital. Health care plans need to be balanced against each other to establish priorities, and balanced judgment is essential to achieve the maximum benefit from putting the plans into operation.

648. DUFFUS, A. J. and SMITH, N. **Temporary staffing service: an answer to fluctuating needs in hospital staffing.** *Hospital Topics*, Chicago, 1976, Nov./Dec., vol. 54, no. 6, pp. 43-48.

The Western Pennsylvania Hospital (West Penn), Pittsburg, Pa., has been making appreciable annual savings by using an outside nursing service, Homemakers Upjohn. It is almost impossible to devise a specific rule for determining how many temporary nurses can be used efficiently by a unit, as hospitals find it difficult to know how many patient days to expect in any month. West Penn recommends no more than 40 per cent in its critical care units and 70 per cent in its medical and surgical wards and it is up to the staffing co-ordinator to send each temporary back to the same unit as often as she/he is needed in the interest of continuity. The temporary staff are on the whole well received by the physicians, nurses and administrators and complaints are usually due to personality conflicts rather than to quality of work. They are paid the same hourly rate whether on day or night duty with no special bonus for superiority or merit, but it is often difficult to obtain sufficient numbers during summer and winter holidays as well as weekends. For it to be successful it is important to choose an agency with standards as high as this one.

649. GERMAINE, A. **Nursing administration: problem solving and 'others'.** *Hospital Administration in Canada*, Don Mills, Ont., 1977, Jan., vol. 19, no. 1, pp. 38, 41.

Discipline is an important feature of any staff development scheme within the hospital and is important in guiding and training an individual. It is governed by three principles: (i) regulations should be realistic, reasonable and should be reassessed to determine their validity; (ii) the members of staff should know all the policies and regulations and why they are necessary; and (iii) all reprimands should be fairly given, and the treatment should be consistently corrective and constructive. The instances when reprimand is necessary are outlined. Guides for assessing the situation and reprimanding the employee are presented so that an understanding of the situation can be fairly arrived at, and responsibilities can be equitably analysed and discharged.

650. BISSETT, E. M. and GRAHAM, J. **Flextime in nursing.** *Nursing Times*, London, 1977, Jan. 13, vol. 73, no. 2, pp. 68-71.

A pilot inquiry into the possibility of introducing flextime into hospital wards revealed that it would be a popular move. Staff reaction to the idea, and the type of home commitments influencing working hours were analysed. The methods of recording flexible working hours are discussed, and the advantages and disadvantages presented. The study indicated that the important factors influencing staff were personal circumstances, family commitments and travelling time.

651. STOCKER, J. Möglichkeiten einer rationellen und übersichtlichen Arbeitsablaufgestaltung bei Anwendung des Berichtsystems. **[The feasibility of a rational and clear structuring of workflow using the report system.]** *Krankenhaus*, Stuttgart, 1977, Jan., vol. 69, no. 1, pp. 10-12.

This system of organizing work on the ward, it is claimed, incorporates the advantages of the various systems of nursing care irrespective of the structural style of the hospital. Patients in a general ward are divided into four categories: the mildly ill, the ambulant and those partly able to look after themselves; the bedfast; the acutely ill; and the chronic sick and long-stay patients. A detailed work plan is displayed on a board where everyone can see it: this plan allocates patients' rooms to specific areas and each area is put in charge of a registered nurse for a period of seven to 14 days. This nurse becomes the point of contact for all patients in an area and she can herself organize the work in her area and advise and supervise the assistant nurses and student nurses allocated to her. This gives the ward sister more time for planning, co-ordinating and co-operating. This method makes possible the use of the 'report system' described in an earlier paper [see *Hospital Abstracts*, Vol. 16, Abstract 498] which eliminates 90 per cent of the detailed and labour-intensive administrative work previously done by nurses.

652. CARR, A. J. **Clinical nurse teaching: programme for the practising nurse.** *Nursing Times*, London, 1977, Jan. 27, vol. 73, no. 4, occasional papers, pp. 13-14.

In an attempt to build up a teaching team for the full implementation of the courses of the Joint Board of Clinical Nursing Studies, and in anticipation of legislation on the recommendations of the Committee on Nursing, Newcastle Area Health Authority have introduced a part-time programme of day release for experienced sisters/charge nurses

to gain the City and Guilds Further Education Teacher's Course and qualify as clinical teachers. The syllabus follows closely the City and Guilds Further Education Teacher's Certificate. The students' reactions to the course are outlined. Within five years it is hoped that at least 100 experienced nurses will have obtained this qualification.

653. DARTINGTON, T., NURSE, G. and WILSON, M. **Preparing nurses for counselling.** *Nursing Mirror*, Sutton, Surrey, 1977, Jan. 27, vol. 144, no. 4, pp. 54-56.

The Institute of Advanced Nursing Education promoted a part-time counselling course covering one academic year for nurses who wished to develop their counselling skills. The aim of the course was to develop awareness of the relationships between colleagues within their professional roles. Four main headings emerged from the integrated syllabus: (i) individual development; (ii) counselling concepts; (iii) the nursing profession; and (iv) specific difficulties. Course members were highly motivated, although the bias represented by the preponderance of women made it difficult to examine fully some aspects of the caring relationship. The techniques used in the lectures/discussions and discussion groups are outlined. A dominant theme of the groups was the difficulty of identifying what was meant by counselling and how this differed from the giving of advice or information. The nature of the work also brought into focus personal difficulties. Issues raised regarding counselling were that counselling was itself antipathetic to the nursing culture and case studies were not easily disentangled from management issues within the systems of care.

654. MURRAY, L. **The two-plus-one scheme: has it been successful?** *Nursing Times*, London, 1977, Feb. 10, vol. 73, no. 6, occasional papers, pp. 21-24.

A descriptive account is presented of the shortened nurse training course run by six hospitals in Glasgow; the State Final Examination is taken after two years and is followed by a third pre-registration year, hence the two-plus-one scheme of training. The entrance requirements and course objectives together with the course structure are outlined. The success of the scheme is assessed. The evidence suggests that A-levels by themselves are of limited use in trying to explain success or attrition. As the size of the intake increases so does the attrition rate: the two schools with the smaller intakes had the least number of students who left or failed. Consequently, the optimum size of intake may need to be only 12 to 20 students. There is a need for greater correlation between theory and practice in the training courses. Comments from the students suggest a certain degree of stress. The findings suggest that ideally the aims should be specified both in terms of the demands to be made on the learners and in terms of the type of nurse likely to emerge from the course.

655. CLARKE, M. **Research in nurse education.** *Nursing Times*, London, 1977, Feb. 17, vol. 73, no. 7, occasional papers, pp. 25-28.

The role of research in nursing education and the areas of research currently studied are discussed. Little research in nurse education is concerned with the relationship between actions and consequences in educational situations. Emphasis in research has been chiefly on selection testing, and the evaluation of structural change in nurse training. The reluctance of researchers to become involved in the evaluation of the work of nurse teachers is discussed. The need for the development of measures of nursing care is common to research in clinical nursing, management and education.

Areas of research into nurse education already studied include: (i) evaluation of education programmes; (ii) examinations and assessments; (iii) teaching and learning; (iv) studies of nurse teachers; (v) recruitment, selection and wastage; and (vi) the search for selection tests.

656. HOUSE, V. G. **Principles for successful training.** *Nursing Times*, London, 1977, Jan. 20, vol. 73, no. 3, pp. 106-107.

The research unit of the General Nursing Council for England and Wales has been involved in the evaluation of experimental schemes of nurse training leading to state registration. The significant features of the experimental schemes are: (i) fewer students than on a traditional three-year course; (ii) greater individual attention and a closer relationship with tutorial staff; (iii) freedom of expression regarding teaching and training; (iv) better integration of theory and practice; (v) many experimental course students are supernumary; (vi) some groups have their own clinical teacher; and (vii) many courses are held between 0900 to 1700 from Monday to Friday. The difficulties a student has to overcome are discussed. Integration of theory and practice often appears to be achieved and appreciated on shortened courses, and many of the principles and policies carried out in experimental schemes could now be applied to schools of nursing with very little difficulty.

657. KRUSE, F. H. A. M. Intramurale zorg mist mankrachtbeheersing. **[Institutional care lacks manpower management.]** *Ziekenhuis*, Utrecht, 1977, Jan. 19, vol. 7, no. 2, pp. 40-43.

A study of employment conditions in hospitals showed a high turnover and shortage of nursing staff, lack of flexibility between functions, lack of co-operation between sections, and emergency measures which exacerbated structural problems. Of all nursing staff less than 45 per cent were qualified, of those qualified 25 per cent left nursing, and there was an overall shortage of 10 per cent. Recruitment among 17-year-old school leavers for the long in-service nurse training faced heavy competition from career training in other fields and immaturity among early trainees in facing the realities of nursing often led to tensions. The general trend towards higher education and the proposed raising of the school leaving age will raise expectations and narrow the supply for the lower echelons of nursing with their more menial routines. The average age among nursing staff was found to be increasing due to an increase in married women and in men entering the nursing profession. Suggestions are made for regrouping whereby menial work becomes distributed as part of more advanced training packages, for better career prospects to attract more men, for more opportunities for part-time staff and for a basic health training with supplementary courses gradually to replace the in-service training. A warning is given against filling gaps with temporary or foreign labour as this would impede long-term organization of part-time staffing.

658. KIRKBY, R. J. and others. **Smoking in nurses.** *Medical Journal of Australia*, Glebe, 1976, Dec. 4, vol. ii, no. 23, pp. 864-865.

A random survey of 220 nurses from four Sydney metropolitan hospitals on smoking habits revealed that nurses did not smoke less than the rest of the population, nor were they giving up smoking at a greater rate. There was no significant difference between

the proportion of male nurses (55.7 per cent) and the proportion of males (45.0 per cent) in the Australian sample who smoked. However, the 52.2 per cent of female nurses was significantly greater than the 29.0 per cent reported for the Australian female population. Increased smoking in female nurses may reflect a response to stress. Further analysis reveals that nursing staff were giving up smoking at the same rate as the general Australian sample.

659. BHANUMATHI, P. P. **Nurses' conceptions of 'sick role' and 'good patient' behaviour: a cross-cultural comparison.** *International Nursing Review*, Geneva, 1977, Jan./Feb., vol. 24, no. 1, pp. 20-24.

A study of the similarities and differences in the conceptions of nurses in the United States and India towards 'sick role' and 'good patient' behaviour compared with attitude patterns of nurses towards chronically ill and acutely ill patients. The method of study is outlined. The results reveal that the majority of the American nurses expected their patients to know what is going on, be polite, considerate, hopeful, and to relax whereas Indian nurses expected their patients to be adaptable, friendly, grateful and dependable. The results of the study have implications for nursing practice. It is important that nurses with different ethnic backgrounds working together should understand each other's beliefs, attitudes and values in order to develop good working relationships. Students need to know that nurses' values are influenced by socio-cultural patterns. There is a need for further cross-cultural international research in the area of patient care in the hospital and the community.

660. MARKS, I. M. and others. **Nursing in behavioural psychotherapy: an advanced clinical role for nurses.** London, Royal College of Nursing, 1977, 149pp. £2.00

This report traces the development of an advanced clinical role for nurses in adult behavioural psychotherapy during a three-year research project at the Bethlem Royal and Maudsley Hospitals. The work culminated in the establishment by the Joint Board of Clinical Nursing Studies of an 18-month course in behavioural psychiatry for registered psychiatric nurses. Following an introduction the report covers: selection and training; patient selection, treatment and outcome; secondment, work output and teaching; and the national course and consideration of general issues.

661. PRYKE, M. M. and HARPER, J. F. **Age-related effects on female nurses.** *Australian Hospital*, Prahran, Vic., 1977, Jan., no. 4, p. 8.

A group of young trainee nurses and a group of older nurses who had been successful in their profession were compared using the Ipat Anxiety Scale Questionnaire and the Eysenck Personality Inventory. The results revealed no significant age-related effects on anxiety scores of young and old female nurses. Neuroticism, extraversion and lie scale scores differed significantly with age. The anxiety score result is consistent with previous studies which show a similarity of personality type over a wide age range of nurses. Both age groups score in the middle range of anxiety; the result is at variance with the clinical impression but consistent with research results that show female student nurses to be less anxious and more dependable than the general females in a college population. Nursing may attract students whose personality structures can assume defensive strategies more readily in order to cope with anxiety.

ANCILLARY STAFF

662. McManus, W. J. **A staff handbook for porters.** *Hospital and Health Services Review*, London, 1977, Jan., vol. 73, no. 1, p. 13.

The porters at the Royal Aberdeen Infirmary lacked specific guidance to meet the peculiarities inherent in their role. This led to the production of a pocket-sized reference book containing information that would cover as many as could be envisaged of the eventualities likely to be encountered by them in the course of their duties. The booklet contains 96 pages of information and is in two sections: quick reference, with a plan of the buildings; and standing instructions and items of general interest concerning the hospital. With certain modifications it could be universally applied to portering staff in the United Kingdom.

ORGANIZATION AND ADMINISTRATION

See also Abstract Nos. 683, 690, 718, 719

663. Levenstein, A. **Effective change requires change agent.** *Hospitals*, Chicago, 1976, Dec. 16, vol. 50, no. 24, pp. 71-74.

An increasing number of social factors make innovative change in hospitals more essential. Hospitals must be receptive to change, challenge traditional promises and criticize old methods. The problems of developing innovations and introducing them so that the staff who are to use these methods accept them are discussed. Compatibility must be established between staff and innovator. Guidelines summarizing the methods of introducing new ideas are presented. The need for closer links between the hospital and the community and the innovator and staff are discussed.

664. Shortell, S. M. and Brown, M., editors. **Organizational research in hospitals: invitational forum, Northwestern University, May 1-2, 1975.** Chicago, Blue Cross Association, 1976, viii, 112pp.

The papers in this volume were presented at a forum sponsored by the Hospital Research and Educational Trust of the American Hospital Association and North Western University. The purpose of the forum was to bring together individuals who were currently in the midst of, or who had recently completed, relatively large-scale comparative studies of American hospitals. The papers were on: organization theory and health services delivery; the effect of pre-admission testing on length of stay; a comparative study of multi-unit health care organizations; decision-making criteria and organization performance; hospital structure and post-operative mortality and morbidity; the effects of management practices on hospital efficiency and quality of care; and implications of reported organizational research for administrators.

665. Hunt, E. J. **Participative management—a compromise.** *Hospital and Health Services Review*, London, 1977, Feb., vol. 73, no. 2, pp. 40-44.

Tameside Hospital, Ashton-under-Lyne, Lancs., developed the concept of multi-disciplinary staff consumer forums in order to implement a new form of participative management. Four different types of forums were set up: domestic; catering; laundry and linen services; and patient services. The object of the forums is to examine the

problems, defects and inadequacies relating to each service. The functions of the forums are: (i) to act as a communications medium; (ii) to act as a problem-raising medium; and (iii) to act as a problem-solving medium. The constitution and the tasks of the forum chairman are discussed. Each of the four functional forums is held once every two to three months. The advantages of the system are: (i) the concept has been a reasonable success; (ii) an effective communications structure is produced; (iii) it is an economical form of participative management; and (iv) both 'sides' are united with the common aim of solving a problem. The experiment is a compromise form of participative management with great potential. Multidisciplinary geographical forums have been re-established at Tameside's smaller peripheral hospitals. The management system is clearly defined and staff are now actively encouraged to help improve the general standard of service, resulting in greater co-operation, better staff relationships and improved hospital services.

ECONOMICS OF HOSPITAL MANAGEMENT

666. SHEELEY, D. R. and SHERMAN, H. **Conservation in hospital resource use: treatment of pneumonias. An investigation of care in four hospitals over the past decade.** *Annals of Internal Medicine*, Philadelphia, 1976, Nov., vol. 85, no. 5, pp. 648-652.

A study of patient care in four hospitals compared levels of resource use between 1964 and 1974 for patients with a primary diagnosis of pneumonia. Results revealed a decreased length of stay in all hospitals, but within the categories of diagnostic and therapeutic resources each hospital had a unique pattern of change. Changes in resource by category changes, intensity of use, and the influence of resource changes on the total bill are discussed. Large increases in the use of diagnostic or therapeutic resources (up to 217 per cent) were reflected as only minor increases in the partial hospital bill over the decade (<11 per cent). Increased intensity of resource use has contributed to increasing per-day charges of up to 27 per cent, compared with recent average cost rises of more than 10 times that amount for daily hospital expenses. Further investigations may be made to study why the length of stay has decreased. Possible reasons include earlier diagnosis and admission to hospital, better use of out-patient care or the release of patients earlier in their illness.

667. DOWLING, W. L. **Hospital production: a linear programming model.** Lexington, Mass., D.C. Heath, 1976, xiv, 167pp. £8.55

The purpose of this study is to develop a conceptually sound approach to analysing the efficiency with which hospitals produce patient care, and to test its usefulness. A linear programme model of hospital production is developed and used to examine efficiency in a community hospital. The study demonstrates how techniques of this type can be brought to bear on health service problems. Examples of input and output and flowcharts are included.

668. FELDSTEIN, M. **Quality change and the demand for hospital care.** (Discussion Paper No. 475) Cambridge, Mass., Harvard Institute of Economic Research, 1976, 54pp.

This paper describes and explains the rising cost of hospital care in the United States

with the aid of an econometric model. The essence of the explanation is that the explosion of hospital costs reflects a rapid change in the quality and style of hospital care and not an increasing cost of providing the same product. The dramatic change in the quality of care is primarily due to the increased demand caused by the growth of private and public insurance.

669. ROTHMAN, S. **Hospitals find cooperation can pay off big.** *Hospitals*, Chicago, 1976, Dec. 1, vol. 50, no. 23, pp. 51-52, 55.

Sherman Hospital and St. Joseph Hospital, Elgin, Ill., have developed a new working relationship which has meant a reduction in the cost of health care to the community. Both hospitals decided that they required a high energy radiation unit, and after arbitration the matter was decided in favour of St. Joseph Hospital. Further discussions arose over selection of an areawide co-ordinator for the trauma network, a renal dialysis centre and the designation of a mobile intensive care unit resource hospital. The advantages of the working relationship are outlined. Schemes are no longer duplicated and balanced treatment can be offered. Sharing responsibilities within the community benefits both the community and the hospitals.

RUNNING COSTS

See also Abstract Nos. 678, 739

670. SØRENSEN, V. D. Hotelpriser og sygehuse. **[Hotel costs and the hospital.]** *Norsk Sykehustidende*, Oslo, 1977, Jan., vol. 50, no. 1, pp. 2-8.

The inventor of the concept of personnel units (PU or systematized staff statistics) describes the way in which his units are used in Denmark as an accounting factor of the same level of significance as money [see *Hospital Abstracts*, Vol. 14, Abstract 943]. On the basis of the use of his units, the author provides the Norwegian hospital management system with an answer to adverse newspaper comparison of the cost of hospital treatment with that of hotel prices. A hypothetical case is followed through a course of treatment at a hospital. The functions of the hospital are divided between nursing (ward functions), investigation and treatment (ancillary), and service (administration, kitchen, engineering and supply). Use of the PU concept allows a complete break-down of the extent to which each item in a patient's treatment involves expenses to the system. In an hotel one receives a room, a made-up bed, cleaning services, and meals. A hospital provides all these plus the services of trained doctors and nurses, with all the investment in ancillary functions backing them up The hospital has only one possible method of checking its efficiency, and that is by comparison—internal and external, and only one factor is suitable for such comparison: the personnel unit.

BED OCCUPANCY, ECONOMIC USE OF BEDS

671. WOOD, S. D. **Forecasting patient census: commonalities in time series models.** *Health Services Research*, Chicago, 1976, vol. 11, no. 2, pp. 158-165.

Accurate forecasts of patient numbers can provide hospital administrators with the information necessary to make a more effective assessment of the level of a variety of

services demanded in a hospital. The study outlined aimed to suggest a simple yet effective model for predicting total numbers in hospitals and to demonstrate that acceptable forecasts of numbers might also be obtained by considering the patient census data only. Highly accurate patient census forecasting models are presented for five hospitals using a general equation for integrated autoregressive moving average (IARMA) forecasts. A general model based on features common to all five hospitals is compared with the specific models. The specific models produced forecasts with approximately two per cent absolute error in one-day-ahead forecasts; and the general model produced 2.6 to 5.8 per cent error in one-day-ahead forecasts, and 10 to 20 per cent error in four-week-ahead forecasts. Experience with IARMA procedures indicates that the model can adapt to changes, provides a convenient method of analysing model difficulties and generates alternative formulae if the basic forecasting needs updating.

APPOINTMENT SYSTEMS, WAITING LISTS

672. Cox, A. G. **Admissions by the book.** *Lancet*, London, 1977, Feb. 5, vol. i, pp. 301-302.

Northwick Park Hospital, Harrow, Middx., has developed a simple procedure for planning surgical admissions. The system is geared to the regular operating lists. An admissions book is taken to every out-patient clinic and an operation date is agreed upon with each patient who has to come in. The details are entered in the book for the required date with additional comments to enable the length of each operation to be estimated. Most patients are admitted the day before the operation when all investigations are carried out. The advantages of the system are: (i) the patient knows when he is coming in and can plan accordingly; (ii) there is no waiting list; and (iii) an unacceptable backlog of patients can be easily noticed. The disadvantages of the system include over- and under-booking. A rule that only half of each list a month or more in advance should be booked works well and patients who can be admitted at short notice will be called to fill in the spaces. The admissions book is vital to the unit's day-to-day work and is referred to constantly to see how patients can be fitted in. The book represents a domestic effort independent of the hospital's systems.

DATA PROCESSING

See Abstract Nos. 673, 679, 723, 724, 729, 759

ORGANIZATION AND METHODS, WORK STUDY

See Abstract Nos. 688, 720

MEDICAL RECORDS

673. Taylor, J. D. **Control system ensures documentation of care.** *Hospitals*, Chicago, 1976, Dec. 1, vol. 50, no. 23, pp. 83-85.

Geisinger Medical Center, Danville, Pa., established a management control system to reduce the numbers of deficiencies in the medical record system. A computerized

control system has significantly improved the running of the department. The aims of the system are discussed. The advantages are: a simple, economical and timely system based on the minimum amount of information; it quantifies a previously unknown deficiency problem; is accepted by all staff; concentrates the resources of the institution on the most important problems; specific information for use in a medical audit to assess the quality of care can be produced; and the number of deficiencies decreased by 55 per cent after four months. The scheme integrated management skills and the responsibilities of the administrative and departmental staff to produce a more effective method.

674. SCANAGATTA, A. Il servizio di microfilmatura e archiviazione delle cartelle cliniche. **[Microfilming service and storage of medical records.]** *Ospedale*, Torino, 1976, Nov./Dec., vol. 29, nos. 11/12, pp. 295-300.

The central records department in the Verona hospital group has installed a microfilm system to help process the records of more than 70,000 patients a year. The author describes how the system works. The 'jacket' was chosen in preference to any of the other supports available because it allows the patient's record to be microfilmed as soon as he is discharged; the jacket can then be filed alphabetically and the record can, if necessary, be reproduced very quickly.

HOSPITAL STATISTICS

See Abstract No. 759

HOSPITAL ACCREDITATION AND SIMILAR SCHEMES

See also Abstract No. 760

675. JOINT COMMISSION ON ACCREDITATION OF HOSPITALS. **Accreditation manual for hospitals. 1976 edition.** Chicago, Joint Commission on Accreditation of Hospitals, 1976, 194pp. $7.50

This new edition of the Commission's standards and their interpretation includes several new sections as well as substantial revision of others. In addition to general administrative policies and procedures it now covers: patients' rights; quality of professional services; building and grounds safety; functional safety and sanitation; infection control; anaesthesia services; dietetic services; emergency services; governing body and management; hospital-based home care programme; medical record services; medical staff; nuclear medicine services; nursing services; out-patient services; pathology services; pharmaceutical services; physical medicine services; professional library services; radiology services; respiratory care services; social services; and special care units. A glossary and index are also included.

LEGAL ASPECTS OF HOSPITAL ADMINISTRATION

See Abstract No. 646

FINANCE AND ACCOUNTING

676. ERESIAN, J. G. **Hospital business should be everyone's 'business'.** *Hospitals*, Chicago, 1976, Dec. 16, vol. 50, no. 24, pp. 64-66.

The need for more people to become involved in hospital costs control is discussed. Increasingly there is pressure for people within the hospital to become directly associated with financial arrangements. Hospital staff who have had traditionally little or no financial involvement and knowledge are now considered as 'fiscal laymen'. The problems of obtaining information and the technical features of hospital finance that may confront fiscal laymen are discussed and a fiscal orientation checklist has been established as a guide. The checklist can be amended and adjusted to suit each institution's needs. All existing material in the checklists should be kept up-to-date. Training sessions should be also held. These measures should improve financial understanding and increase the effectiveness of the work of the fiscal laymen.

FINANCE

677. ANDERSEN, R., KASPER, J. and FRANKEL, M. **The effect of measurement error on differences in hospital expenditures.** *Medical Care*, Philadelphia, 1976, Nov., vol. 14, no. 11, pp. 932-949.

Differences in expenditure for medical care in the United States among various subgroups in the population according to age, income, residence and ethnic characteristics have important public policy implications. Few attempts have been made to assess the extent to which these differences may be influenced by errors of measurement. A framework for examining the impact of various types of error including random error and bias is presented and applied to data on hospital expenditure from a national survey which includes consumer reports and information from hospitals, doctors and third-party payers who provided services to families in the sample. Differential error according to demographic and social characteristics is estimated. The impact of differential errors on conclusions about the distribution of health resources is discussed.

678. GEBERT, A. J. Die Ausgaben der Universitätskantone für das Spitalwesen: ein Ansatz zu einer kausalen Analyse. **[Hospital service expenditure by cantons with universities: an assessment for a causal analysis.]** *Veska*, Aarau, 1977, Jan., vol. 41, no. 41, pp. 8-19.

This is a detailed mathematical analysis of hospital expenditure in the eight Swiss cantons which have universities: Zürich, Berne, Freiburg, Basel City, St. Gallen, Waadt, Neuenburg and Geneva. The aim is to discover why, for example, Basel City spends more than any other canton per head of population and why Freiburg spends easily the least. Some of the possible factors investigated include the degree of industrialization, the fact that some local authorities bear a part of the hospital costs, and the amount of tax income. The conclusion is that economic factors are a predominant influence on the performance of cantons in this field.

HOSPITAL ACCOUNTING

See also Abstract No. 684

679. GARRETT, R. D. **Hospital computer systems and procedures. Vol. 1. Accounting systems.** New York, Petrocelli/Charter, 1976, xvi, 326pp. $14.95

This volume is the first in a series designed to provide the systems analyst with the information required to automate some of the functions of the hospital and to suggest an approach to many other hospital and medical areas. In this volume accounting problems are discussed in terms of computer procedures, with stress on understanding the requirements and motivation of the manual systems being automated and also upon the means of installing the computerized versions once they are programmed. Following an introduction, there are chapters on: accounting system overview; the five year plan; the patient accounting system; patient accounting forms; patient accounting implementation; admissions; payroll; supplies accounting; and the general ledger.

SUPPLIES AND STORES

SUPPLIES

680. ROCK, R. B. and MESHELANY, C. **Studying the statistics on standardization committees.** *Hospitals*, Chicago, 1976, Dec. 16, vol. 50, no. 24, pp. 81-82, 86, 88.

A national survey set up in 1976 substantiated the need for a more intensive study of hospital product evaluation methods. It indicated that over half of the hospitals in the United States use standardization committees. The larger the hospital the more likely it is to have a committee. The average standardization committee has six or seven members and is chiefly made up of representatives from purchasing, central supply and nursing departments. The committees may be chaired by a supplies officer or the chairmanship may be divided equally between administration, central supply, the nursing service and the medical staff. The role of the committee is outlined. The formation and role of standardization committees appears to be an integral part of the work of hospitals in the United States. The potential gains and benefits that can be accrued from the formation of such committees should be made known to all hospitals.

681. HOUSLEY, C. **Working with the hospital committee structure.** *Dimensions in Health Service*, Toronto, 1976, Dec., vol. 53, no. 12, pp. 10-11.

The supplies manager should recognize the importance of the hospital organizational structure and the fact that in order to manage people, supplies, systems, money and methods he must work through several hospital and medical committees. The supplies manager should be a member of any committee that has as its objective the review and evaluation of supplies. The importance of the product evaluation committee is discussed. All hospital committees, including pharmacy and therapeutics, operating theatre, shared services, group purchasing, cost containment, nuclear medicine, medical records, infection and budget committees, require his presence and expertise since he is the only person trained to deal with the organization of supplies. Supplies management

influences all aspects of the hospital, and the participation of the supplies manager on committees can demonstrate the effectiveness of the concept to the entire hospital organization.

PURCHASING

682. HOLMGREN, J. H. **Purchasing for the health care facility.** Springfield, Ill., Charles C. Thomas, 1975, xii, 268pp. $19.50

Written primarily for purchasing or supplies officers this book should also serve as a handy reference for administrative staff, department heads and others engaged in purchasing. It is in five parts: functions and policies; controls and systems; processes; legal aspects; training evaluation and research; and trends.

683. WOOLDRIDGE, M. G. **Prime vendor benefits.** *Hospital Administration in Canada*, Don Mills, Ont., 1977, Jan., vol. 19, no. 1, pp. 42-45.

Regina General Hospital, Sask., has established one major prime vendor contract for medical and surgical products. The establishment and development of the scheme is outlined together with the method of implementation. The benefits derived from this method are: improvements in user satisfaction; reduced inventory investment; improved performance by suppliers; closer relationship between customer and supplier; indirect economic benefits including the avoidance of preparing purchasing orders; and total inventory management. The experience of the hospital indicates that much can be achieved in the span of a year as long as senior management understands and approves of the objectives.

CATERING, DIETETICS, KITCHENS

HOSPITAL CATERING

684. WAARD, J. M. de. Nieuwe wijze van kostenrubricering. [**New catering expenditure recording procedures.**] *Ziekenhuis*, Utrecht, 1977, Jan. 19, vol. 7, no. 2, pp. 43-45.

This method for comparing the catering expenditure of two hospitals is directly related to practice and enables a detailed comparison to be made of both costs and working methods. All factors involved in catering are divided into categories: staff; management and services; premises and equipment; furnishings; materials and basic ingredients; consumable products; and energy. The categories are then further broken down into small production factor units with clearly defined functions. The cost for each unit is calculated, analysed and corrected, taking into account numbers of working days, labour costs per hour, qualifications of staff employed for certain functions, increases in building costs, interest rates, age of buildings and equipment, etc. The figures for each unit can then be compared between the hospitals and present a picture of the differences in costs and working methods per unit. The procedure would be too time-consuming for present hospital administrations and the setting up of a special team, including a cost analyst and a practical expert, is recommended.

685. PAHL, G. Die Verwendung von gefrosteten Fertigmenüs in der Diätversorgung eines Krankenhauses. **[The use of frozen convenience food menus in a hospital dietetics department.]** *Krankenhaus Umschau*, Kulmbach, 1977, Jan., vol. 46, no. 1, pp. 27-28.

A special hospital for the prophylaxis and rehabilitation of heart patients in West Germany carried out, over a four-month period, a pilot experiment on the use of frozen foods in special diets—95 per cent of the hospital's patients are on such diets. In collaboration with the producers diet plans were worked out giving three-week menu cycles for four diets: reduction diet, 500 Kcal. a day; reduction diet 1,000 Kcal. a day; special heart diet; and diabetes diet. The manufacturers succeeded in producing more appetizing meals, although there were certain difficulties with such components as gravies, than were possible by conventional methods. Partly because the kitchens were not equipped to deal with frozen food, and because staff had to be retained during the short-term experiment who would have been released if the system were in permanent use, the cost per patient day with frozen food was DM8.01, compared with DM6.37 previously. Where new or modernized kitchens are being planned the introduction of frozen food dishes would definitely be advantageous.

686. SCHAEDE, P. Die Verwendung der Tiefkühlkost (Fertiggerichte) im Krankenhaus. **[The use of deep-frozen food (preprepared) in the hospital.]** *Krankenhaus Umschau*, Kulmbach, 1977, Jan., vol. 46, no. 1, pp. 20-22.

Between 1970 and 1972, thanks to the initiative of the German Hospital Institute and the collaboration of the German Deep-Freeze Institute, experiments with deep-frozen meals were carried out at the Bethesda Evangelical Hospital, Duisburg. The frozen foods used were meat, vegetables and casserole dishes in bulk. Meals were prepared in a central kitchen and distributed on a tray system. Patient questionnaires in 1972 showed their views to be as follows: appearance of food, good or very good 78.4 per cent, satisfactory 15.3 per cent; taste, good or very good 57.7 per cent, satisfactory 31.5 per cent; quantity, sufficient 95.4 per cent. Costs varied little as compared with conventional meals but labour was saved, particularly at peak periods. Nutritive value, taste and appearance were at least as good as for traditionally prepared meals.

687. SCHÄFER, H. Das Tiefkühlsortiment und seine Verwendung. **[The deep freeze food stock and its use.]** *Krankenhaus Umschau*, Kulmbach, 1977, Jan., vol. 46, no. 1, pp. 22-26.

Deep-frozen food has many advantages, including retention of freshness and nutritive value, labour-saving, and absence of waste materials. Two tables show the weight loss when fresh or canned foods are used: this must be taken into account when comparative costs are calculated. The various forms in which frozen foods can be used are described, and the characteristics and uses of the following food groups are set out in detail: vegetables; fruit and fruit juices; fish and fish products; potato and flour products; meat and meat products; poultry; milk and milk products; ready prepared dishes; and ice cream. Details are also given of the equipment and storage facilities required.

DIETETICS IN THE HOSPITAL

See Abstract No. 685

LAUNDRIES AND LINEN SERVICE

LAUNDRIES

688. DARBY, D. R. and ZIMMER, R. O. **Study identifies, analyzes components of in-house laundry.** *Hospitals*, Chicago, 1976, Dec. 1, vol. 50, no. 23, pp. 73-74, 76-77.

Bridgeport (Conn.) Hospital carried out a study of its laundry to: (i) discover why the laundry's pounds per patient day figure was 30 per cent higher than the average figure for other in-house laundries; (ii) ascertain the number of staff and amount of linen required for cost-effectiveness; (iii) evaluate alternative policies; and (iv) implement a management information system to monitor the use of the laundry. Alternative policies were evaluated. The study revealed that a change in linen policy alone would save $54,200. As a result of improved methods, new equipment, improved management and continued administrative support the pounds per patient day at Bridgeport Hospital decreased from 19.38 to 18.24. Productivity increased from 33.94 pounds per-man-hour to 47.90 reflecting an increase of 41 per cent over a four-year period. The hospital is continuing to monitor the laundry and to seek alternative methods to contain laundry and linen costs.

HOSPITAL LINEN AND TEXTILES

See also Abstract No. 688

689. BRITISH STANDARDS INSTITUTION. **Specification for hospital bedding. Part 3. Flexible polyurethane pillows.** (BS5223: Part 3: 1976) London, B.S.I., 1976, 3pp.

This British Standard sets out the requirements for flexible polyurethane foam head pillows with permanent fabric covers for use in hospitals by all patients except those under one year of age. It covers: dimensions and masses; materials; covering; construction; physical requirements; sterilization and disinfection; condition; marking; and packaging. Details are given of porosity and adhesion tests in appendices.

HYGIENE IN THE HOSPITAL

690. ERLER, H. and others, editors. Das stationäre und ambulante Gesundheitswesen: Planung, Organisation Bau und Betrieb. Band 25. Krankenhaushygiene: Leitungs- und Betriebsorganisation. **[The planning, organization, building and administration of in- and out-patient facilities. Volume 25. Hospital hygiene: administrative and management organization.]** Berlin, Verlag Volk und Gesundheit, 1976, 132pp.

The first part of this volume consists of 11 papers given at a conference on problems of hospital hygiene. Topics covered include: control of skin and mucous membrane bacteria; hygiene controls; reconstruction of infectious diseases unit; problems of hygiene in intensive care; risks of infection from injections and their prevention; central sterile supply facilities; results of tests on sterilizers in clinical units; noise

control as a task for hospital hygiene; and outline hygiene regulations for health service institutions. The second part of the publication consists of papers on: management and organization theory and its application to health and social services; research into the working methods of polyclinics; work classification in the medical staff grades; and the present state and future development of hospital design in the USSR.

HOSPITAL INFECTIONS

See also Abstract No. 642

691. AYLIFFE, G. A. J. and others. **Antibiotic-resistant *Staphylococcus aureus* in dermatology and burn wards.** *Journal of Clinical Pathology*, London, 1977, Jan., vol. 30, no. 1, pp. 40-44.

Nose swabs and swabs for skin lesions of patients in dermatology wards and the burns unit of Birmingham Skin Hospital were taken between 1967 and 1975. The swabs revealed a high incidence of multiple antibiotic-resistant strains of *Staphylococcus aureus* in both environments. Over 20 per cent of the strains isolated from patients on admission to the dermatology wards were multiresistant. Resistance to benzyl penicillin, tetracycline, erythromycin and fusidic acid were common in the dermatology department; a smaller proportion of strains were resistant to lincomycin and a few were resistant to methicillin; resistance to novobiocin and chloramphenicol was uncommon. In the burns unit, fusidic acid resistance was uncommon, but resistance to benzyl penicillin, tetracycline, erythromycin, novobiocin, neomycin, methicillin and lincomycin was common. Several of the antibiotics to which resistance was common in the burns unit were rarely if ever used there; strains resistant to those antibiotics probably remained common in the ward through the frequent use of other antibiotics especially erythromycin, to which these strains were also resistant. Eradication of resistant strains in dermatology units is difficult but a complete restriction on the use of certain antibiotics may eventually be effective. It is desirable that patients with burns be treated in special units to prevent the transfer of their bacteria to other patients in the ward.

692. KASLOW, R. A., MACKEL, D. C. and MALLISON, G. F. **Nosocomial pseudobacteremia: positive blood cultures due to contaminated benzalkonium antiseptic.** *Journal of the American Medical Association*, Chicago, 1976, Nov. 22, vol. 236, no. 21, pp. 2407-2409.

Pseudomonas cepacia or *Enterobacter* species or both were isolated from blood cultures of 79 patients in a community hospital between April 1971 and March 1972. The source of the infection was an aqueous benzalkonium chloride solution used for venipuncture antisepsis. Aqueous benzalkonium is notorious as a source of contamination in hospitals and for its failure to disinfect. Contamination of blood cultures by organisms from the antiseptic most likely accounted for positive cultures in 35 of 38 patients (92 per cent) with *P. cepacia*. The remaining three patients had repeated blood cultures positive for *P. cepacia* and circumstantial clinical evidence of bacteremia; they may have contracted diseases through exposure to the contaminated antiseptic. Aspects of hospital infection control were examined and recommendations for improvements discussed. After the source of contamination was recognized alcohol and iodine were adopted for skin preparation prior to venipuncture and in the eight subsequent months only three blood cultures yielded either *P. cepacia* or *Enterobacter*.

693. SNYDMAN, D. R. and others. **Nosocomial viral hepatitis B: a cluster among staff with subsequent transmission to patients.** *Annals of Internal Medicine*, Philadelphia, 1976, Nov., vol. 85, no. 5, pp. 573-577.

Outbreaks of hepatitis B in staff and patients have been recognized increasingly in the United States over the past years. A study of a 300-bed hospital serving the Kansas City area was carried out in two phases: (i) examination of four cases of hepatitis B in members of staff; and (ii) examination of two patients who acquired the infection three months after the members of staff. Sera from all six were subtype ayw and e-determinant positive. The investigation is outlined and the epidemiology of the cases discussed. The source of the illness was discovered to be the contamination of in-dwelling arterial catheters by an inhalation therapist incubating acute hepatitis B. Strict sterile methods should be used when handling catheters. Gloves should be worn and the syringes that cover the three-way stop-cocks should never be reused. The cluster of cases among the staff underlines the need for a thorough epidemiological analysis of each case of hepatitis in hospital staff. Intimate patient-staff contact, with a break in usual methods, is probably necessary for the transmission of infection. The importance of the cluster of infection in terms of recognition and transmission through indwelling arterial cannulae should be stressed. Only through thorough investigation of all cases can high risk areas and techniques be identified and corrected.

694. TEOH-CHAN, C. H. and others. **Hospital *Salmonella johannesburg* infection and its possible role in the community spread of the infection in Hong Kong.** *Journal of Hygiene*, London, 1977, Feb., vol. 78, no. 1, pp. 113-119.

Salmonella johannesburg, a previously rare salmonella serotype, has established itself rapidly as an important and highly prevalent cause of gastroenteritis among children in Hong Kong. The clinical features are usually mild but chronic. It has been suggested that *S. johannesburg* was introduced into Hong Kong through imported foods or animal feeds, but no common vehicle could be traced as the source of infection. A study of a paediatric ward in a general hospital revealed that non-infected patients admitted to the ward usually acquired *S. johannesburg* infection within three to seven days, with or without symptoms. Hospital cross-infection could be a significant factor in contributing its spread in the community. The rapidity with which *S. johannesburg* spread was helped by: (i) its tendency to produce chronic infection; (ii) its multiple resistance to antibiotics; and (iii) the higher rate of infection of *S. johannesburg* over other salmonellas endemic in this area. The contributing factors, combined with the overcrowded conditions in many hospitals may have contributed to the spread of the infection in the local community.

695. TINNE, J. E. **Persistence of a specific Pseudomonas infection in a large general hospital.** *Scottish Medical Journal*, Glasgow, 1977, Jan., vol. 22, no. 1, pp. 16-21.

An epidemic of *Pseudomonas aeruginosa*, Type 10, in 1967, affected seven patients, with three deaths, in the cardiac surgery unit of the Royal Infirmary, Glasgow. All patients had primarily a respiratory infection implicating a Bennet ventilator. Type 10 strains were later found widely distributed in the operating theatre. Moist conditions appeared obligatory to convey the organisms. Sporadic infections during ensuing years were studied, and a recurrence of the epidemic strain took place in the winter of 1972. The current incidence of the type 10 strain is discussed together with its ecology.

Pseudomonas has only been isolated in damp conditions, is highly mobile and will survive and rapidly colonize any damp situation. The variety of methods advocated for disinfecting ventilators bears witness to the problem of eradicating Pseudomonas. This particular strain is capable of exceptional virulence in the human lung and is a highly specific strain in its pyocine pattern.

SOURCES OF INFECTION

See also Abstract No. 692

696. WISHART, M. M. and RILEY, T. V. **Infection with *Pseudomonas maltophilia* hospital outbreak due to contaminated disinfectant.** *Medical Journal of Australia*, Glebe, N.S.W., 1976, Nov. 6, vol. ii, no. 19, pp. 710-712.

Pseudomonas maltophilia was isolated from 63 patients in the King Edward Memorial Hospital for Women, Subaico, Western Australia, between August 1973 and May 1974; 37 of the adults had significant bacteriuria. Primary cultures were obtained mainly from specimens of urine in adults and from intraarterial catheter tips and umbilical swabs from neonates. In the majority of cases the organism appeared to be a contaminant but in seven it was responsible for infection. The source of the organism was deionized water used for diluting Savlon concentrate (chlorhexidine, 1.5 per cent; cetrimide 15 per cent). After detection of the source all Savlon in use in the hospital was withdrawn and all bottles and lids washed and autoclaved. The method of preparation and distribution of Savlon to the wards was altered. Since then the organism has not been detected in any clinical specimens and routine microbiological checks of the distilled water and Savlon have not revealed it.

PREVENTION AND CONTROL

See also Abstract No. 745

697. WEINSTEIN, R. A. **The design of pressure monitoring devices: infection control considerations.** *Medical Instrumentation*, Arlington, 1976, Nov./Dec., vol. 10, no. 6, pp. 287-290.

Pressure transducers are being used increasingly for monitoring cardiovascular and cerebrospinal fluid pressures in critically and acutely ill patients. Reports of infections related to contamination of or incomplete sterilization of pressure monitoring devices have appeared infrequently. The experience of the Center for Disease Control, Atlanta, Ga., suggests that contaminated monitoring devices may be a more frequent source of infection than is generally appreciated. Several measures for preventing monitoring-related infections are presented and current improvements in transducer use and design will hopefully improve and encourage application of these recommendations. It will be important for the industry to: (i) design pressure monitoring devices that can be sterilized rapidly, efficiently and easily between use; (ii) develop simple methods for calibrating and setting up monitoring devices after sterilization; and (iii) design simple monitoring systems that will be resistant to contamination and allow monitoring tubing and fluid to be replaced aseptically at regular intervals.

698. STAMM, W. E. **Elements of an active, effective infection control program.** *Hospitals*, Chicago, 1976, Dec. 1, vol. 50, no. 23, pp. 60, 62, 64.

In spite of mandatory legislation the objectives of an infection control scheme remain unclear to many hospital staff in the United States. Those involved in an infection control scheme include patients, infection control nurse, epidemiologist, infection committee and all other staff. Each scheme must be tailored to the type of patients for which a hospital provides care. The aim of the scheme is to improve methods of patient care and reduce the incidence of hospital infection. The role of the infection control nurse is outlined; there should be a balance between surveillance and analysis of infection. The hospital epidemiologist must have a working knowledge of microbiology, epidemiology and infectious diseases as well as an interest in infection control. The effectiveness of the infection control committee varies between hospitals but the two basic functions are: deciding hospital policy, and ensuring implementation of the policies. The cost-effectiveness of various infection control activities should be evaluated to ensure further administrative support when funds are required in the future.

699. JEPSEN, O. B. and others. Decentralisering af sygehushygiejniske opgaver: reorganisering af det infektionsforebyggende arbejde ved Bornholms amtskommunes behandlings- og plejeinstitutioner. **[Decentralization of hospital hygiene duties: reorganization of infection prevention in Bornholm's county health establishments.]** *Tidsskrift for danske Sygehuse*, København, 1977, Jan., vol. 53, no. 1, pp. 7-9.

Decentralization of hospital hygiene functions in Denmark began in May 1975, and was completed on the Island of Bornholm (population: 50,000) in October 1976. A county hygiene committee was established to advise and assist in problems of a hygienic character, the post of hygiene nursing officer being of great importance in the absence of a clinical microbiological laboratory on the island. The committee is at the disposal of the individuals or groups who consult it, and its reports are delivered to them alone. Ordinary meetings are held once a quarter. The committee comprises a nurse elected by a county institution, nurse and consultant from the Central Hospital, county health nurse, hygiene nursing officer, hospital pharmacist, medical officer of health, and clinical microbiologist or corresponding medical consultant. A member normally serves for two years at a time. The committee's responsibilities comprise: (i) advice on questions of ordinary hygiene; (ii) advice on hygiene, isolation, storage and laboratory procedures; (iii) purchasing; (iv) buildings; (v) infection prevention precautions; (vi) staff training and propaganda (public relations, campaigns, etc.); (vii) follow-up; (viii) registration and application of epidemiological data; and (ix) communication. The model adopted on the island may prove suitable for other small communities with no prospect of having a microbiological laboratory.

700. LANGE, S. and HERRLER, M. Wirtschaftlichkeit alternativer Bettendes-infektionsverfahren. **[The economics of alternative methods of bed disinfection.]** *Krankenhaus*, Stuttgart, 1977, Jan., vol. 69, no. 1, pp. 13-18.

A study has been made of the comparative costs of two methods of bed disinfection (bedstead, mattress and bedside table) in a general hospital with six ward floors each having 170 beds. The first method, described as 'partly decentralized', has a separate disinfection unit for each ward floor; the second involves the use of a bed centre serving all ward floors. Figures for the first method are as follows: manual steam

sterilization—capital cost DM342,000, annual running costs DM197,540, running costs per unit DM7.90; machine steam sterilization—capital cost DM816,000, annual running costs DM178,170, running costs per unit DM7.13; and spraying chamber—capital cost DM720,000, annual running costs DM220,150, running costs per unit DM8.81. Figures for the bed centre are: manual steam sterilization—capital costs DM114,000, annual running costs DM232,680, running costs per unit DM9.31; machine steam sterilization—capital costs DM352,000, annual running costs DM184,990, running costs per unit DM7.40. Details are given of the equipment required and of possible future developments in this field.

701. QUATTRUCCI, J. **The hygiene of stethoscopes.** *Nursing Times*, London, 1977, Feb. 10, vol. 73, no. 6, pp. 193-195.

A study of the hygiene of stethoscopes was based on the assumption that the ear pieces of stethoscopes are unhygienic, and could be vectors of cross infection and cause ear infections among nurses. Various studies on stethoscope hygiene are outlined. A study, using a scheduled questionnaire, revealed that nurses used stethoscopes at least daily and the average number of stethoscopes per ward was three. Sharing has to take place, and 45.5 per cent of nurses said they cleaned the ear pieces before use but only 10 per cent did it every time. Half of the nurses had had some form of ear complaint while nursing, and experienced spots and irritation in their ears, soreness or earache. Almost 14 per cent subjectively assessed the ear pieces as being clean. The study has given some support to the belief that the ear pieces are unhygienic and until bacteriological studies prove that ear pieces transmit and cause infection, simple procedures should be introduced on hospital wards for improving the hygiene of the ear pieces.

HYGIENE IN THE OPERATING THEATRE

702. LAUFMAN, H. **Is laminar airflow necessary for prophylaxis against wound infection?** *Medical Instrumentation*, Arlington, 1976, Nov./Dec., vol. 10, no. 6, pp. 269-274.

Airborne contamination plays a minor but exceptional role in the incidence of surgical infections. The evidence indicates that airborne contamination assumes importance as a source of wound infection only: (i) when an air-handling system becomes grossly contaminated (either through erroneous engineering or through neglect of maintenance and repair); (ii) when an otherwise well-installed and well-maintained effective air-handling system is abused; or (iii) in instances of highly specialized procedures in which a patient's resistance is lowered by disease or drugs, or in which a large foreign body is implanted. Neither the cleanliness of the air in an operating theatre nor the direction in which it is blowing has any effect upon contact or vector contamination from the patient or the surgical team. The various types of air-handling systems are discussed. All available valid evidence supports the view that in the presence of a properly installed and properly maintained conventional air-handling system, the superimposition of a laminar air-flow system, although it does reduce ambient particle counts, has no additional effect on lowering the incidence of wound infection rates. Under these conditions it is concluded that laminar flow is not necessary for prophylaxis against wound infection.

703. NELSON, J. P. **Five years experience with operating room clean rooms and personnel-isolator systems.** *Medical Instrumentation*, Arlington, 1976, Nov./Dec., vol. 10, no. 6, pp. 277-281.

Wound sepsis following surgery is a significant source of post-operative morbidity, particularly in those procedures in which large amounts of foreign materials have been implanted. Two horizontal laminar air flow type clean rooms have been used for almost all clean orthopaedic surgery at St. Luke's Hospital, Denver, Colo., since 1971. The use of clean rooms and staff-isolator systems has been controversial because of their added cost and potential technical inconvenience. A synopsis of studies carried out at St. Luke's Hospital is presented together with the results of tests on three different types of helmet aspirator systems. The results of the study reveal that: (i) all types of orthopaedic surgery may be easily and conveniently carried out in the clean room with scrubbed staff wearing helmet aspirator systems; (ii) mechanical upkeep of the clean room is minimal; (iii) airborne bacteria counts have been reduced by 80 per cent compared with the usual type of operating theatre and by 90 per cent when staff wear the helmet aspirator system; (iv) sterile surface contamination has been reduced by 80 per cent; and (v) the deep infection rate is reduced to 1.6 per cent in the clean room compared with 7.6 per cent in an operating theatre. The use of the clean room, helmet aspirator systems and perioperative antibiotics appears to be associated with reductions in clean wound post-operative sepsis.

704. ULRICH, J. A., CRIBBS, W. and MICHAELSEN, G. S. **Recirculation of air in operating rooms.** *Medical Instrumentation*, Arlington, 1976, Nov./Dec., vol. 10, no. 6, pp. 282-286.

A study was carried out to determine the effectiveness of filtration and recirculation of air in two neurosurgical operating theatres at St. Mary's Hospital, Rochester, Minn. Both operating theatres are equipped with entirely independent air-conditioning systems. The methods used in the two theatres are discussed. The results indicated that a low, airborne, microbial population could be maintained by recirculating filtered air during surgical procedures. The commonly used turbulent system of air delivery was used and high efficiency filters were effective in removing airborne bacteria generated within the operating theatre. Optimal rates and percentage of recirculation were determined. The method of exhaust was confirmed to be important. Exhaust ports at 40 inches above the floor were more effective in maintaining low airborne microbial populations than ports at skirting board levels. The degree of activity of the surgical team and the number of staff in the operating theatre correlated with the airborne bacterial counts.

STERILIZATION

See also Abstract No. 697

705. SURATT, P. M., GWALTNEY, J. M. and SANDE, M. A. **A rapid method of disinfecting the bronchofiberscope.** *American Review of Respiratory Disease*, New York, 1976, Dec., vol. 114, no. 6, pp. 1198-1200.

A method of disinfecting the bronchofibrescope that requires only five minutes was tested against *Mycobacterium tuberculosis*, *Pseudomonas aeruginosa*, *Serratia marcescens*,

Klebsiella pneumoniae, *Staphylococcus aureus*, *Candida albicans*, influenza virus and rhinovirus. The entire inner channel of the bronchofibrescope was brushed five times with 1.5 per cent hexachlorophene detergent and the outer sheath was wiped five times using the same detergent. A solution of povidone-iodine, ethanol and water was lavaged through the inner channel for 30 seconds and wiped five times over the outer sheath. The inner and outer areas of the sheath were also washed with sterile saline. The effectiveness of the method revealed that out of 76 specimens tested, all post-disinfection cultures were sterile, with the exception of one containing less than 10^2 colonies per ml. of *S. aureus*.

SAFETY MEASURES

See Abstract No. 760

FIRES AND FIRE PREVENTION

706. CROFTON, E. C., HILLHOUSE, A. J. and FRASER, A. D. H. **Smoking as a fire risk in Scottish hospitals.** *Health Bulletin*, Edinburgh, 1977, Jan., vol. 35, no. 1, pp. 39-43.

Information on fires in Scottish hospitals, including those attributable to smoking, were sought from all 15 health boards and eight fire brigades through personal interviews and telephone conversations. Ten health boards and five fire brigades were able to supply some statistics; in addition the Scottish Home and Health Department (SHHD) supplied statistics of fires reported to them between 1970 and 1975. The results are presented in two tables. It would seem that no firm conclusion can be made on the number or proportion of fires attributable to smoking: SHHD figures suggest 21 per cent, health board figures an average of 33 per cent and fire brigade figures an average of 45 per cent. A uniform system of reporting fires seems to be desirable, together with closer liaison between hospital staff and fire safety officers on the operation of a smoking policy.

PLANNING FOR MASS EMERGENCIES

707. ROLAND, P. Prinsipper for sykehusets katastrofeplan. **[The principles of the hospital's disaster plan.]** *Norsk Sykehustidende*, Oslo, 1977, Jan., vol. 50, no. 1, pp. 13-16.

A disaster is defined as an event which overloads the hospital's normal capacity, which would in some cases mean more than 10 severely injured cases. A committee has been set up at Aalesund Hospital, consisting of the head of surgery, assistant head of medicine, and an anaesthesia sister, with the senior anaesthetist as chairman, to co-ordinate plans internally and with other services. The areas covered by the emergency plan are: (i) the alarm—the switchboard operator has a fixed routine to follow when an alarm comes in; (ii) calling in of all staff; (iii) provision and maintenance of a disaster first aid box (with material for treating 30 casualties); (iv) routine for despatch of first aid team; (v) discharge of non-essential in-patients, usually up to 90 per cent and arrangement of casualty receiving stations outside the hospital; (vi) traffic regulation,

emergency access to hospital, dispersal of inquisitive bystanders; (viii) emergency admissions procedure—this must be thoroughly rehearsed, as it is usually the first to break down; (viii) efficient internal communications; (ix) records and information; and (x) establishment of a flexible 'disaster leadership' to run the hospital during the emergency. The plans should be frequently rehearsed, and modified where necessary.

THE PATIENT

ADMISSION AND RECEPTION

See Abstract Nos. 744, 761, 762

WELFARE OF THE PATIENT

See also Abstract Nos. 638, 706, 726, 727, 735

708. CAMPBELL, D. **Smoking policies in hospitals.** *Dimensions in Health Service*, Toronto, 1976, Dec., vol. 53, no. 12, pp. 20-23.

A study was carried out to analyse the various policies regarding smoking in several Canadian hospitals. Two-thirds of the participating hospitals had some form of smoking policy and there appeared to be a relationship between the size of hospital and the existence of a smoking policy; 71 per cent of hospitals claimed that smoking regulations were necessary to provide a safe environment for patients and members of staff. Smoking was generally allowed in waiting rooms, sitting rooms, canteens, offices and consulting rooms, whilst it was forbidden in treatment rooms, halls and lifts. Smoking was generally allowed in patient units except in the heart and chest wards. Doctors and nurses had responsibility for enforcing smoking regulations on the ward. The larger the hospital the more likely there would be a special anti-smoking scheme for the staff. The survey revealed that there were many difficulties involved in establishing and enforcing smoking policies and it increased awareness and concern of health professionals in the problems and hazards of smoking.

709. CROFTON, E. C. **The sale of cigarettes in Scottish hospitals.** *Health Bulletin*, Edinburgh, 1977, Jan., vol. 35, no. 1, pp. 36-39.

A questionnaire sent to all general and maternity hospitals in Scotland was answered by 181 with a total of 28,790 beds. Of these, 49 had shops in 36 of which cigarettes were sold. Of the 112 hospitals which had a trolley service to the wards, 52 sold cigarettes. There were four vending machines, two in hospitals and two in nurses' homes. The results are discussed.

710. CROFTON, E. C., HAWTHORNE, V. M. and HEDLEY, A. J. **Smoking in Scottish hospitals.** *Health Bulletin*, Edinburgh, 1977, Jan., vol. 35, no. 1, pp. 29-36.

A survey of present practices and policies on smoking was carried out in six health board areas and covered 331 acute and 160 long-stay units. There were no restrictions

on smoking in 151 (31 per cent) of the units; the percentage was higher in the long-stay (38 per cent) than the acute units (27 per cent). Nineteen per cent of the units had no restrictions for certain selected patients. Nineteen per cent limited smoking by restricting it to certain times; 43 per cent restricted it to special areas, but only 10 per cent were able to provide a no-smoking section in the ward recreational area for non-smoking patients. Two-thirds of the units required visitors not to smoke (77 per cent of acute and 46 per cent of long-stay). Nursing staff were not allowed to smoke in any part of the ward area in 44 per cent of the units; 46 per cent restricted smoking by staff to a designated area. Discouragement of smoking by patients included no smoking notices (in 64.4 per cent of the units), health education by nursing staff (37.9 per cent), hospital guidance to nursing staff (33.6 per cent) and anti-smoking leaflets and posters (22.2 per cent). These results are discussed.

VOLUNTARY SERVICE, VOLUNTARY WORKERS

711. HOYT, C. E. and BILLADELLO, J. **With a finger on the pulse of volunteer potential.** *Health and Social Service Journal*, London, 1977, Jan. 21, vol. 86, no. 4525, pp. 102-104.

A volunteer scheme at Coney Island Hospital, N.Y., allows young people a taste of medical work and saves the hospital half a million dollars a year. The scheme began in 1967 as a service to the high school students of the community, but it has now expanded from 22,252 volunteer hours in 1967 to 89,987 volunteer hours in 1975. The volunteer services department now supervises 400 to 500 volunteers a month. The volunteers do not replace salaried staff but support the staff by providing hours of work for which there is no money allocated. As the needs of the hospital have grown medical and professional staff have offered courses enabling the Health Careers Exploration Program (HCEP) members to work in specialized fields. At present there are 21 training courses open to the selected volunteers. The philosophy of the HCEP is based on the concept that young people want to become involved and can work best when they are adequately motivated, trained and supervised. The training programmes of the volunteers are discussed together with the legal restrictions that have to be imposed on their duties.

THE GENERAL PRACTITIONER AND HIS PATIENTS

712. SWARBRICK, P. J. **The first five years: one practice's view of a hospital general practitioner's unit.** *Health Bulletin*, Edinburgh, 1977, Jan., vol. 35, no. 1, pp. 7-10.

This paper summarizes some of the experiences of one group in looking after their patients in the general practitioner unit, Bangour General Hospital, West Lothian. The unit's operation has been described previously [see *Hospital Abstracts*, Vol. 13, Abstract 248] and another practice has reported its use of the unit in the first year [see *Hospital Abstracts*, Vol. 13, Abstract 247]. During the five-year period, 365 patients were admitted from the practice; their average age was 61 years and the average length of stay was 14 days. The patients could be divided into four groups: (i) acute medical conditions; (ii) patient requiring a series of investigations; (iii) social admissions; and (iv) convalescent patients. There was a drop in the numbers admitted after the initial period, but admissions now appear to have stabilized at a level that can be coped

with amongst other practice work. While there may be an expansion of these units in the future, there will be a definite limit to their use. The patients, without exception, welcomed the ward because of its more informal atmosphere and the continuing contact with their own family doctor.

TRANSPORT OF PATIENTS

713. NIELSEN, H. C., JUNG, A. L. and ATHERTON, S. O. **Evaluation of the Porta-Warm mattress as a source of heat for neonatal transport.** *Pediatrics*, Evanston, 1976, Oct., vol. 58, no. 4, pp. 500-504.

One risk of transporting newborn infants to referral centres is hypothermia. Modern transport incubators have limitations in their ability to keep infants warm. The Porta-Warm mattress has been introduced since it reduces the time required to warm the incubator and warms the incubator in cooler environments. The mattress can be easily recycled, is portable, inexpensive to operate and reusable. Tests were carried out to evaluate the warming effectiveness of the mattress. The use of the mattress during transport as an additional source of heat had the advantages of: (i) warming the incubator in cooler environments than the heater alone could achieve; (ii) shortening the time required to warm the incubator; and (iii) improving the warming of hypothermic infants during transport.

HOSPITAL CARE

See also Abstract Nos. 632, 659, 666, 754, 759

714. MCNERNEY, W. J. **The quandary of quality assessment.** *New England Journal of Medicine*, Boston, 1976, Dec. 30, vol. 295, no. 27, pp. 1505-1511.

Inevitably, quality assurance reflects the context of which it is part, for example underuse or overuse of services is partly a function of their availability and financing. Thus, it can promote change or rationalize lack of it, save money or cost money. Given the current state of the art, it is imperative to develop quality assurance on an evolutionary path while options are kept open and the focus is clearly on outcomes. Also, quality assessment must be seen as a behavioural tool, not a policing mechanism. Its scope must be broadened to include the total episode of illness, taking into account lifestyle and environmental factors, with criteria developed and applied as close to the point of patient as possible, within broad guidelines. It is essential to build on in-place capabilities, for example insurance carrier data, rather than create new overlapping systems. Finally, the management setting within which quality assurance functions, in both the public and private sectors, must be improved.

715. Des P.S.R.O. en France? **[Professional standards review organizations in France?]** *Revue Hospitalière de France*, Paris, 1976, Dec., vol. 40, no. 296, pp. 1301-1307, 1309-1313, 1316-1317, 1319-1322.

Students taking the economics of health option during their fourth year at the National School of Administration prepared a document describing the professional

standards review organizations (PRSO) as they have been developed in the USA, and sent it to 26 prominent figures in the sphere of health care, including members of parliament, leaders of trade unions representing doctors, nurses, and other hospital staff, and representatives from the social security associations. They then interviewed these people on their attitudes to the mounting cost of health care and the possible introduction of PSRO in France. The majority were acutely aware of the dangers to the health service from escalating costs. Attitudes to PSRO ranged from scepticism to acceptance.

716. PHILPS, R. M. **The development and implementation of quality control programs into Modbury hospital.** *Australian Hospital*, Prahran, 1977, Jan., no. 4, pp. 9-10.

The need for hospital services to develop and carry out system evaluation schemes to provide information for future improvements of the services is increased as a result of recent advances in nursing education and science. Modbury Hospital, Adelaide, measured the efficiency of the nursing services by using a patient care assessment system and patient care critiques. The objectives of the patient care assessment system are discussed together with the sampling and monitoring of the results. The problems experienced during the assessment system trials are outlined. The advantages of the system are: (i) nursing staff can critically assess the care provided; (ii) the results can be used as training aids for students; and (iii) it is a simple management quality control system. The system of primary care critiques used in the hospital, whereby patients comment on hospital services is outlined. The advantages of the system also provide feedback for future planning and development and permit monitoring of the progress of departments and services.

DISCHARGE OF PATIENTS

717. WHEELER, K. E. **Discharge unit alleviates disrupted admission schedules.** *Hospitals*, Chicago, 1976, Dec. 16, vol. 50, no. 24, pp. 57-59.

The creation of a discharge unit at Duke University Hospital, Durham, N.C., allows patients to be immediately admitted to their rooms without having to wait until the previous occupant has been discharged. The unit is regarded as an in-patient ward of the hospital and is designed for 15 to 20 patients who remain there until transport arrives. A new 'pending discharge' routine has been developed in all wards and admission points to allow a rapid turnover of beds in the various wards, and improve discharge planning in most departments. The discharge unit is not used by the obstetric, paediatric or psychiatric services or by certain units a long distance from the centre of the hospital. Emphasis is placed on follow-up with various services. No charges are made for the service, and the unit is staffed by a nurse and a receptionist. Patient reaction to the unit has been favourable.

HOME CARE, AFTER-CARE

See Abstract No. 761

SPECIAL DEPARTMENTS

WARDS

See also Abstract No. 638

718. ISERMANN, H. and OBST-CZAYKA, H. Uber den Einsatz einer Stationssekretärin auf einer klinischen Krankenstation. **[Employment of a ward clerk on a hospital ward.]** *Öffentliche Gesundheitswesen* (*Das*), Stuttgart, 1976, Dec., vol. 38, no. 12, pp. 812-814; summary in English p. 812.

This paper is based on the experience gained from the employment of ward clerks on a 30-bed neurological ward (for two years) and a 20-bed male psychiatric ward (for six months) at the Sarepta Hospital, Bielefeld. Duties include: processing orders, prescriptions, etc., after ward rounds; charting; administrative work relating to admission and discharge, assembling medical records, etc; ordering from administration, kitchens and pharmacy and maintaining stores; taking specimens to the laboratory and collecting reports; answering the telephone; helping visitors and arranging flowers; and, when time allows, helping with instrument cleaning, in the kitchen, and with laundry. An eight-hour day was found to be suitable on the neurological ward and a five-hour day on the psychiatric ward: a starting time of 1000 was adopted. The main advantage of ward clerks is that they relieve nurses of non-nursing duties: they are also most useful in helping patients and keeping them in touch with the outside world. Possible disadvantages are that ward clerks, being at the centre of things, might not always pass on important information. Doctors might tend to consult them rather than nurses. They might also come between patients and nurses so that the latter get rather out of touch. At Sarepta Hospital ward clerks have been found to be satisfactory.

719. MUNSON, F. C. and HEDA, S. S. **Service unit management and nurses' satisfaction.** *Health Services Research*, Chicago, 1976, vol. 11, no. 2, pp. 128-142.

Nurses' satisfaction was compared in 55 patient units; 32 with service unit management (SUM) and 23 without. Satisfaction of licensed practical nurses was found to be unrelated to SUM, but intrinsic task satisfaction of registered and head nurses was positively related to the use of SUM. The transfer of non-professional tasks from nursing and a reduction of tension are possible explanations for the positive relationship between SUM and professional nurses' satisfaction. Hospitals with highly motivated nurses should build a structure supporting the practice of nursing that minimizes the need for non-professional tasks, and co-ordinates the work of ancillary nurses. SUM can be used to achieve this, although it is not the only method.

OPERATING SUITES

See also Abstract Nos. 623, 631, 702-704

720. O'DONNELL, D. J. **Theatre utilization analysis.** *Medical Journal of Australia*, Glebe, N.S.W., 1976, Oct. 23, vol. ii, no. 17, pp. 650-652.

A method of analysing operating theatre use is presented as a management informa-

tion system applicable to medical administration. The activities of a theatre are examined and measured, and utilization is expressed as a percentage of:

$$\frac{\text{theatre time used—excess utilization time.}}{\text{time available}}$$

Other parameters that can be determined are discussed. A report form drawn up for each allocated session shows: (i) number of sessions worked; (ii) number of operations performed; (iii) percentage use; and (iv) overall percentage use. This method is simple to use in practice and lends itself to computer programming. Information can provide exact comparisons of performance of the staff involved and determine needs for additional resources.

ANAESTHESIA

See Abstract No. 646

PHARMACY

721. ADAMS, R. C. and ALLEN, J. D. **Contemporary pharmacy services in the small hospital.** *Hospital Pharmacy*, Philadelphia, 1976, Nov., vol. 11, no. 11, pp. 462-463, 466, 468, 469.

The pharmacy of Montgomery County Hospital, Blacksburg, Va., has established several modern pharmaceutical techniques. The fact that the hospital is relatively small is not an insurmountable obstacle to establishing progressive techniques. Procedures with prescriptions, unit dose distribution, charges, and intravenous admixture schemes are outlined. Storage and dosage methods, education, training and drug control systems are given, but the benefits of these must be convincingly presented to nurses and administrators. Pharmacists must learn to analyse ideas, consider the views of others, and anticipate possible problems when setting up new pharmaceutical techniques. The smaller hospital offers an environment in which a pharmacist can practise in a satisfying and rewarding manner.

722. MERRITT, G. J., GARNETT, W. R. and ECKEL, F. M. **Analysis of a hospital-based drug information center.** *American Journal of Hospital Pharmacy*, Washington, 1977, Jan., vol. 34, no. 1, pp. 42-46.

A drug information centre housed in the School of Pharmacy, North Carolina Memorial Hospital, was resited in the pharmacy department of the hospital. A study was carried out to measure the output of the drug information centre before and after the move. The average number of questions per month before the move was 58.1, after the move it rose to 146.3, with 30.8 per cent of the questions being asked by doctors, 27.6 per cent by pharmacists, 24.1 per cent by clinical pharmacists, 12.3 per cent by nurses and 5.2 per cent by other professionals. The largest number of questions were in pharmacology covering aspects of toxicity or adverse reactions followed by pharmaceutical and therapeutic questions. Pharmaceutical questions took the least amount of time to answer while therapeutic questions took the longest. The study demonstrated

that there was a significant increase in work load. The number of questions which were a matter of judgment showed the need for a qualified pharmacist in the centre.

723. FREYE, E. and LEVY, J. V. Ein computergesteuertes Medikamenten-Informationssystem im Einsatz auf der Intensivstation. [**A computerized drug information system for the intensive care unit.**] *EDV in Medizin und Biologie*, Stuttgart, 1976, vol. 7, no. 4, pp. 139-142.

An electronic data processing system which provides information on drugs at the bedside in an intensive care unit is described and illustrated. A keyboard and television screen at the bedside enable computer-stored information to be flashed on the screen in readable form. Information can be obtained on suitable drugs for a particular illness, exact dosages, side effects, drug interactions, absolute and relative contraindications, and the effect of drugs on a particular laboratory test value. Nurses have found the system to be particularly valuable as it also becomes a teaching device, but doctors have been more sceptical and have to some extent resented being 'dictated to by a machine'.

724. SHAPIN, P. G. and TITLE, I. **Simple automated drug distribution system.** *American Journal of Hospital Pharmacy*, Washington, 1977, Jan., vol. 34, no. 1, pp. 88-90.

A simple automated drug distribution system used at Fairfax Hospital, Mt. Vernon Hospital and the Commonwealth Doctors Hospital, Falls Church, Va., is described. The system required: (i) linking three computer programs; (ii) installing a cathode ray terminal and a split pattern character printer in the pharmacy; and (iii) designing a new piggybank drug label. The benefits of the new system include: (i) reduction in the number of drugs sent to the wrong nursing station; (ii) reduction in the number of unnecessary reorders; (iii) elimination of all incorrect reorders; (iv) elimination of the need for addressograph labels for drugs; and (v) use of the drug label for charging the patient, thus eliminating incorrect bills. Under the new system reorders per order were reduced by 24 per cent. The system has improved the distribution of drugs with a relatively modest financial outlay.

725. HANNAY, D. G. **Self-medication: a developing concept in future hospital pharmacy service.** *Hospital Administration in Canada*, Don Mills, Ont., 1977, Jan., vol. 19, no. 1, pp. 33, 36-37.

A 22-month study was conducted in a 12-bed hospital ward of the Victoria Hospital, London, Ont., to design a scheme of work with selected well-motivated patients, the majority of whom are spinal injury cases, in order to increase their self-reliance and decrease their dependency on hospital staff by providing them with much of their medicine at the bedside. Patients are taught that personal control of their disease or injury is the best control there is and by learning how to administer their own drugs they are more prepared to cope with their limitations at the time of discharge. The method of selecting the patients is outlined. The results of the study revealed that out of 50 suitable candidates 36 were patients with spinal injuries while the others were patients with varying degrees of neurological damage, peripheral neuropathies and orthopaedic problems. Only two patients were withdrawn from the scheme, and there was an 83 per cent average adherence rate. It appears that within the hospital setting with instructions and information provided by the pharmacist, patients follow their

regimen more closely than at home. Positive and negative aspects of the system for the patients are discussed, together with the benefits for the staff.

726. WEBER, C. E. and SATHER, M. R. **Discharge medication counseling.** *Hospital Topics*, Chicago, 1976, Nov./Dec., vol. 54, no. 6, pp. 39-42.

The most overlooked aspect in the rehabilitation of patients has been to ensure the safe and proper use by them of their medication and their attitude towards their medication regimen. A recent survey of over 50 studies showed that complete failure to take prescribed medications occurred in 25 to 50 per cent of all patients. A discharge-medication programme was designed to educate patients for discharge by encouraging responsibility in self-management of medication. The clinical pharmacist on the ward provides each patient with individual consultation regarding the proper use and administration of medications. Before discharge the patient is given: (i) a medication schedule listing each medication, directions for and times of administration, important precautions, the name of his physician and pharmacists (to whom side effects must be reported) and the hospital telephone number; and (ii) a medication calendar. The paper includes specimens of the above forms.

727. HLADIK, W. B. and WHITE, S. J. **Evaluation of written reinforcements used in counselling cardiovascular patients.** *American Journal of Hospital Pharmacy*, Washington, 1976, Dec., vol. 33, no. 12, pp. 1277-1280.

The department of cardiology together with the department of pharmacy, University of Kansas Medical Center, Kansas City, developed a patient education booklet and medication sheets designed to answer many of the questions that the cardiology patient may have before and after admission to hospital. The acceptance and effectiveness of the medication cards and booklets were evaluated. Patients discharged from the cardiothoracic surgery and cardiovascular medicine unit were monitored over a three-month period; approximately one month after discharge counselling, which included the written reinforcements, 22 out of 50 patients were questioned. All patients except one indicated that they had read the material after leaving the hospital, and many had read it more than once. The effectiveness of the material was found to be only partially acceptable when general and specific medical questions were asked. The names and uses of the drugs taken by patients were identified correctly. The limitations of the study are outlined. The overall evaluation of the written reinforcements on cardiovascular medications appears to be acceptable to the patients and realistically effective.

728. RUPP, C. A. and others. **Quality control of small-volume sterile products.** *American Journal of Hospital Pharmacy*, Washington, 1977, Jan., vol. 34, no. 1, pp. 47-49.

A method for bacterial surveillance of small-volume sterile products in hospitals was developed and tested at Mary's Help Hospital, Daly City, Calif. The pharmacy department prefills syringes for the hospital's unit dose drug distribution system and unit-of-use respiratory therapy drugs. The method for quality control testing is outlined: 10 per cent of each lot of pre-packaged unit dose syringes is tested by filtration through a sterile micropore filter. The filter unit is incubated after fluid thioglycollate medium has been added. If turbidity or a colour change is found, further testing with blood agar and gram straining is carried out to identify the organism. The effectiveness of the

method was tested. The results indicated that the method was reliable, simple and easy to carry out, and could easily be adapted to various sterile delivery units.

LABORATORIES

729. KRAMER, D. Computerunterstützte Rationalisierung in einem ärztlichen Gemeinschaftslaboratorium. [**Computer-assisted rationalization in a co-operative medical laboratory.**] *Krankenhausarzt*, Karlsruhe, 1976, Nov., vol. 49, no. 11, pp. 758, 761-764, 766, 768-774, 776.

A description is given of the electronic data processing installation set up in a medical laboratory practice serving general practitioners, specialists, a number of hospitals, and the public health service. The following subjects are covered: clinical chemistry; haematology; microbiology; serology; immunology; nuclear medicine *in vitro* tests; cytology; and hygiene of water and sewerage. A list of the hardware is given and procedures and services described under the following heads: daily routine and the recording of tests; input of values; on-line links (not yet in use in this system); reports of findings; listing records; investigations in progress; long-term storage; billing; statistical safeguarding of quality; program changing; bacteriology text processing; wages accounting; book-keeping; statistical program; and maintenance. It has been possible to rationalize procedures and the system shows extreme flexibility. The paper is illustrated with specimen printouts.

730. JANSEN, A. P. and others. **Experience in the Netherlands with an external quality control and scoring system for clinical chemistry laboratories.** *Clinica Chimica Acta*, Amsterdam, 1977, Feb. 1, vol. 74, no. 3, pp. 191-201.

A national quality control scheme for clinical chemistry was established in the Netherlands, and in 1974 45 per cent of hospital laboratories took part in the scheme. A score system of the results of six trials performed with lyophilized sera of different commercial origins, is discussed. The results indicate that there is a slight tendency for continuous flow methods to yield better, more reproducible results, although discrepancies in results between various laboratories are not only caused by the techniques used by the participants but also by unknown factors which are now under investigation. Using the score system of the results, independent of the standard deviation, it is possible to choose laboratories for investigating selected methods for the establishment of assigned values in sera—'referee' laboratories.

DIAGNOSTIC X-RAY DEPARTMENT

731. **X-ray department: daylight processing of X-ray films.** (Abstracts of Efficiency Studies in the National Health Service, No. 177) London, Her Majesty's Stationery Office, 1977, [5]pp. £0.35

The dark room of the diagnostic X-ray department at the Royal Sussex County Hospital, Brighton, was unusable for several months because of building operations. 'Daylight' processing equipment was installed on a temporary basis so that the department could continue to function. The opportunity was taken to evaluate and compare

the 'daylight' and conventional methods of processing X-ray films. This abstract gives details of the Regional Management Services Division's evaluation of the effects of the system on the flow of patients and on the work of the radiographers and dark room technicians. This showed that the 'daylight' processing system: (i) increased the work load of each radiographer on a day shift by less than 30 minutes; (ii) reduced the work load of the dark room technicians by 2.36 hours per shift or 18 per cent; and (iii) reduced the work load of radiographers at night by an average of 47 minutes. The cost of the equipment was £12,000, but there is no need to install a conveyor system, only limited darkroom facilities are required and technicians are not required for routine film processing.

RADIOISOTOPE DEPARTMENT

See also Abstract No. 734

732. ADELSTEIN, S. J. **Organization of cardiovascular nuclear medicine units.** *American Journal of Cardiology*, New York, 1976, Nov. 23, vol. 38, no. 6, pp. 761-765.

Progress in the development of cardiovascular nuclear medicine can be improved by closer co-operation between cardiologists and nuclear medicine physicians in the planning, performance and interpretation of diagnostic tracer studies. The special needs of patients with acute cardiovascular disorders often require further supplementation of the central nuclear medicine unit by satellite units in the coronary care unit, cardiac operating theatres, and post-operative intensive care units. The routine treatment that should be available is discussed together with the design of the units and the equipment and supplies required. The training of staff and the numbers required to carry out the work are outlined. The planning, performance, and interpretation of cardiovascular nuclear medicine studies require a broad and intensive knowledge of nuclear medicine instrumentation, radiopharmaceutical agents and cardiovascular physiology, and there should be close liaison between the nuclear medicine specialist and the cardiologist in order to achieve an effective and efficient service.

REHABILITATION

See Abstract No. 751

PHYSIOTHERAPY DEPARTMENT

733. LARIA, R. La piscina terapeutica. **[The hydrotherapy pool.]** *Tecnica Ospedaliera*, Milano, 1976, Dec., vol. 6, no. 12, pp. 52-58.

The hydrotherapy pool for handicapped children at the Bosisio Parino Institute is described briefly with the help of three photographs and a diagram. Most of the paper is devoted to a description of the Cillit filter system which has been installed there. There is also a diagram of a new pool being built in Milan in which Cillit equipment is to be used.

DEPARTMENTS FOR SPECIAL THERAPY

See also Abstract Nos. 624, 691

734. TORNAR, R. M. Neue Dialyse- und Isotopenstation—Tage der offenen Tür im a. ö. Krankenhaus der Stadt St. Pölten. **[New dialysis and isotope units open days at St. Pölten General Hospital.]** *Österrichische Krankenhaus-Zeitung*, Wien, 1977, Jan., vol. 18, no. 1, pp. 51-52, 55-57.

After the official opening in November 1976 of the new dialysis and isotope units at St. Pölten General Hospital thousands of the town's citizens took advantage of two open days and were shown round the new units. The dialysis unit has six beds for the chronically ill and two places for acute dialysis. There are three places for instruction in home dialysis and nine for 'limited care' where patients need less nursing attention. The isotope unit, for early diagnosis and organ testing, has been converted from a former air raid shelter mainly by the hospital's own labour force. The hospital has a technical control centre, manned 24 hours a day, which continuously monitors all equipment.

INTENSIVE CARE UNITS

See also Abstract Nos. 723, 748

735. MELIA, K. M. **The intensive care unit—a stress situation?** *Nursing Times*, London, 1977, Feb. 3, vol. 73, no. 143, occasional papers, pp. 17-20.

The concept of stress is discussed both in physiological and psychological terms and definitions of the concept are examined. The stressful situations that nurses, patients and relatives find when entering the intensive care unit are discussed together with the problems that may arise. The need for the unit to be a close community in which the members must be able to co-operate with each other is emphasized. Possible solutions to the stress problem are: regular group meetings; competitive selection of nurses; and the appointment of a unit co-ordinator. There is a need for objective research into intensive care areas and for constructive criticism by the staff to allow these problems to be tackled.

736. GSELL, O. R. **Geriatric intensive care—indication and contraindication.** *Gerontology*, Basel, 1977, vol. 23, no. 1, pp. 47-54.

The indications for intensive care are discussed on the basis of new statistics assembled by the Swiss Society for Gerontology and covering all intensive care units whether medical, surgical or combined. Analysis of all admissions to 40 units in Switzerland in 1973 shows that one-third are in the age group 65 and above and 11 per cent are over 75 years of age. Nearly 50 per cent of these older patients had circulatory diseases compared to 30 per cent in the general population. The four main diseases of patients admitted to clinics in Nuremberg were myocardial infarction, dysrhythmia, cor pulmonale and pulmonary embolism. It is concluded that advanced age *per se* is no reason for rejecting a patient from an intensive care unit. Diagnosis and therapeutic possibilities are the basic indication for intensive care. Contraindication is present in cases where after several days in the unit no satisfactory life can be expected to follow.

737. ACHESON, R. M. and SANDERSON, C. **Some aspects of management and outcome of acute coronary heart disease in Oxford region.** *British Heart Journal*, London, 1977, Jan., vol. 39, no. 1, pp. 93-98.

Effective clinical management of myocardial infarction is complicated by the fact that 45 per cent of those who die within four weeks of the attack do so within the first hour and 60 per cent within the first six hours after onset. However, if the patient reaches hospital in time high energy direct current electric shock can prevent death from ventricular fibrillation. A study of 532 consecutive admissions to the coronary care unit at the Radcliffe Infirmary, Oxford, was carried out to evaluate how patients who have had ventricular fibrillation successfully stabilized compared with other cases of myocardial ischaemia in terms of survival and return to work over three years, and the effect of the distance from the patient's home to hospital on referral and survival rates. The results support the evidence that not only is direct current shock an effective lifesaver but it also permits people to return to a useful life. The question of distance from the hospital is more complex. Rates of admission to the unit per 1,000 standardized population among people living in the areas around Oxford City were estimated as being 58 per cent of admission rates of cases among residents of the city. It is concluded that insufficient is known about the factors underlying the general practitioner's decision to commit a case of myocardial infarction to other than short ambulance journeys or about the effects of such journeys on prognosis.

738. LARGIADÈR, F. **The organization of intensive care after renal transplantation.** *European Journal of Intensive Care Medicine*, Berlin, 1976, Dec., vol. 2, no. 4, pp. 167-168.

The present state of organization of renal transplant intensive care in 14 centres of Austria, Germany and Switzerland is described. The annual transplantation rate, number of intensive care beds, duration of intensive care, aseptic conditions, apparatus, and medical supervision and staff are discussed. It appears that a renal transplant centre should have at least two beds reserved for intensive care making it possible to keep patients in the unit for seven to 10 days after transplantation. Each room should have at least its own artificial kidney and each bed its own monitoring facilities.

SPECIAL HOSPITALS AND UNITS

OUT-PATIENT

See also Abstract No. 749

739. MARQUIS, K. H., MARQUIS, M. S. and NEWHOUSE, J. P. **The measurement of expenditures for outpatient physician and dental services: methodological findings from the health insurance study.** *Medical Care*, Philadelphia, 1976, Nov., vol. 14, no. 11, pp. 913-931.

Surveys for measuring out-patient health expenditure are evaluated for non-response, errors of measurement and bias. There is a high lack of response from patients whose health care is financed by the public sector in the United States. Estimates of total and out-of-pocket medical and dental expenditure from two surveys using indirect methods

are compared with non-survey estimates. The results indicate that out-of-pocket medical expenditure is over-estimated but the other systems appear unbiased. Estimates using direct, self-administered methods appear to be biased upward. Commonly used record checking methods for evaluating the data will make random error appear as bias. The methodology reveals considerable random error in the measurement of dental expenditure: 44 per cent of the total variance in survey data and 39 per cent of the variance in records.

740. GOLDACRE, M. J. and GATHERER, A. **Use of out-patient services: a simple approach to seeking information.** *Hospital and Health Services Review*, London, 1977, Jan., vol. 73, no. 1, pp. 14-16.

Any decisions to obtain information about out-patients as a routine procedure must consider the work load and the relatively low cost of each attendance. A survey of out-patients in the Oxfordshire area was carried out to: (i) show that useful basic data about out-patients can be obtained relatively simply; (ii) provide a profile of out-patients in the area; and (iii) obtain background information as a measure to suggest directions in which more detailed studies might be worthwhile. The method used is described, and the results analysed. Some of the results have direct practical value, others suggest directions where more practical information might be of value. A continuous survey could provide a diagnostic index or list waiting times. However, the incremental value of and the extra work involved in adding each item of information to such a survey must be critically analysed.

CASUALTY AND ACCIDENT

See also Abstract No. 625

741. SLAY, L. E. and RISKIN, W. G. **Algorithm-directed triage in an emergency department.** *Journal of the American College of Emergency Physicians*, Lansing, 1976, Nov., vol. 5, no. 11, pp. 869-876.

Brooke Army Medical Center, Fort Sam Houston, Tex., has developed an algorithm-directed triage system for use in the casualty department by 'screeners'. The screeners, who may be basic medical auxiliaries, receive 25 hours of classroom and 120 hours of on-the-job training, and use the algorithms to triage patients into one of three treatment areas in the casualty department or to clinics outside the casualty department during the day and evening. The screeners consult with a triage doctor if the use of the algorithm system appears inappropriate. The experience of using the triage system for 78,822 patients during 1975 is discussed and the advantages outlined.

742. MILLS, J. and others. **Effectiveness of nurse triage in the emergency department of an urban county hospital.** *Journal of the American College of Emergency Physicians*, Lansing, 1976, Nov., vol. 5, no. 11, pp. 877-882.

This study carried out at the San Francisco General Hospital shows that an experienced registered nurse, in the emergency department, who is trained to triage, can screen patients and divide them into two groups based on urgency of need for medical care. Ambulatory patients thought to have non-emergency illness were directed to the walk-in service for physician evaluation and treatment, the remainder were seen

in the emergency service. In three months, out of 11,329 patients, 4,150 (37 per cent) of these were admitted to the hospital after physician evaluation and were therefore considered to represent erroneous triage, compared with 31 per cent of patients seen in the emergency service. Of the 77 admitted patients, six were thought to require treatment within a few hours, 67 within hours or days, and four were considered elective admissions. Error in triage was about equally divided between mistaken diagnosis and underestimated severity of illness. The overall accuracy of triage was 98 per cent. Although the system has many advantages it also has drawbacks: (i) additional staff to provide triage nurses is costly; (ii) the position is an extremely stressful one and the turnover rate is high; and (iii) triage history is never completely reliable due to lack of time.

743. KRASS, M. E. **Patterns of local and tourist use of an emergency department.** *Canadian Medical Association Journal*, Ottawa, 1976, Dec. 18, vol. 115, no. 12, pp. 1230-1231, 1233.

Illness patterns of local and tourist patients in the casualty department of the Greater Niagara General Hospital, Niagara Falls, Ont., were compared. Frequencies of specific and broad categories of ailments and rates of admission to the hospital were similar in the two groups. However non-Canadian tourists were admitted at a lower rate than Canadian tourists. Rates of visits to the casualty department were similar within certain age categories, as were rates within the sexes. It is concluded that, in view of the striking similarity in the illness patterns of a group of patients not professionally referred to the hospital and those of local patients who have personal contact with a more extensive medical network, public attitudes rather than the availability of medical staff determine the characteristics of the patterns of illness observed in a casualty department.

744. BRAND, L. A. G. and others. **Patients in casualty.** *Australian Hospital*, Prahran, 1977, Jan., no. 4, pp. 6-7.

An analysis is presented of the time taken for the clerical documentation of 8,898 patients in the casualty departments of 21 public hospitals in Victoria, together with the time the patients waited to be seen by a doctor. The average time for clerical documentation was six minutes with a maximum time of 422 minutes. The average waiting time to see a doctor was 27 minutes with a maximum of 380 minutes. Urgent patients were seen more quickly than non-urgent, but it is still possible for patients considered to be in need of urgent medical attention to have to wait up to four hours to see a doctor. The smaller hospitals averaged less than half the time of the larger ones.

DAY HOSPITALS

See Abstract Nos. 747, 752, 753

INFECTIOUS DISEASES AND ISOLATION

745. BIRTWHISTLE, E. H., GILBY, A. M. and MEYERS, A. J. **Establishment of an isolator tent in a general paediatric ward.** *Nursing Times*, London, 1977, Feb. 17, vol. 73, no. 7, pp. 228-230.

Isolator tents are being used in many hospitals for orthopaedic procedures, cardiac

pacemaker replacements, burns patients and in-patients with pancytopenia. They have also been adapted by Westminster Children's Hospital in conjunction with work in marrow bone transplantation. The three isolators used fit standard National Health Service beds or cots and can be ready for use in 24 to 48 hours. The method of use is outlined, including sterilizing procedures, preparation of food and entry and disposal of items. The nursing aspects of caring for patients in isolators are also considered. It has been found easier to have normal communication with the child when he was in an isolator rather than when he was being cared for by reverse barrier nursing techniques. Much planning and teaching must be carried out before the isolator can be put to use. A methodical, tidy approach to work coupled with aseptic techniques is vital to the successful nursing care of the patient in an isolator tent.

CHILDREN

See also Abstract Nos. 713, 745

746. NEY, P. G. and MILLS, W. A. **A time-limited treatment program for children and their families.** *Hospital & Community Psychiatry*, Washington, 1976, Dec., vol. 27, no. 12, pp. 878-879.

The family psychiatric unit, Royal Jubilee Hospital, Victoria, B.C., opened in 1972 for the treatment of children under 15 with emotional disturbances or behaviour problems. The treatment is based on the theory that the children's psychological disturbances are symptomatic of a disturbance within the family and that treatment will be effective only if directed towards the family as a whole. Each child is admitted for a pre-established period of five weeks, during which time the child's family is also involved in the treatment. Treatment continues for an additional five weeks in the child's home after the child has been released from hospital. More than 350 children have been admitted to the unit, and only 21 children have needed readmission. The treatment of the child is outlined. The results of the treatment have produced greater family cohesion; children are better adapted, have a more positive attitude and are markedly better behaved. The unit appears to be effective in its time-limited treatment approach and efficient in terms of over-all cost to the community.

747. TOMALIN, C. **Forging the missing link in care of disturbed children.** *Health and Social Service Journal*, London, 1977, Jan. 21, vol. 86, no. 4525, pp. 112-113.

A day hospital for disturbed children designed to fill the gap between out-patient psychiatry and residential provision has been established as an extension of the work of the department of child psychiatry, Westminster Hospital, London. The hospital will treat about 12 severely disturbed children between the ages of eight and 12 years at any one time. The average length of stay is expected to be six months and between 30 to 40 children will be helped each year. A variety of settings: schoolroom, kitchen, play area, have been created to allow the children's problems to be identified and treated in situations which they encounter in their daily lives. The cost of converting the building was £28,000, and the yearly running costs will be about £36,000. The hospital is hoping to encourage families of the children to take an interest in the centre so that it becomes part of the local community services.

748. GLUCK, L., editor. **Symposium on organization for perinatal care.** *Clinics in Perinatology*, Philadelphia, 1976, Sept., vol. 3, no. 2, pp. 265-516.

This symposium consists of 31 papers covering the following aspects of perinatal or neonatal intensive care in the United States: regionalization of services; research; organization of units; design of facilities; equipment; diagnostic and treatment services; staff training; infant transport; legislation; and nursing care.

749. SHEFFIELD, R. **Teen health service employs team approach.** *Hospitals*, Chicago, 1976, Dec. 16, vol. 50, no. 24, pp. 93-95, 98.

The Teen Health Service of St. John's Hospital, Lowell, Md., provides out-patient care for the adolescents of the Greater Lowell area who have no doctors of their own or who feel alienated from the care provided for them. The scheme provides physical, mental, social and emotional support on a team basis to patients between the ages of 12 to 19. A weekly staff conference is carried out to allow an exchange of ideas and plan treatment for patients; long-term follow-up is maintained on a regular basis when required. The clinic is open for two evenings a week and an average of eight to 10 patients attend each session. The multidisciplinary team approach has many advantages for adolescent care. Duplication of services is avoided by regular meetings. The Teen Health Service refers adolescents to consultants on the hospital staff and also to local resources for services including dental treatment, rehabilitation, detoxification and career counselling. A health education scheme for young adults is now being developed.

GERIATRICS AND LONG-STAY

See also Abstract No. 736

750. LIBOW, L. S. **A geriatric medical residency program: a four-year experience.** *Annals of Internal Medicine*, Philadelphia, 1976, Nov., vol. 85, no. 5, pp. 641-647.

Greater involvement of doctors is required to improve the health care of the elderly in the United States. Out-patient care is inadequate, unco-ordinated and needs restructuring. Long-stay care is one of the most difficult aspects of care; there are now more nursing home beds in the United States than medical and surgical beds. Institutionalization could be prevented if co-ordinated health systems were developed. The first formal geriatric residency scheme in the United States was developed at the Mount Sinai City Hospital Center, Elmhurst, N.Y., and a second scheme has been established at the Jewish Institute for Geriatric Care, Long Island Jewish-Hillside Medical Center, New Hyde Park, N.Y. The aims of the training schemes are to develop special skills to deal with the medical and psycho-social problems of the elderly and to develop health care systems for the elderly. The emphasis is on the multi-faceted system which includes home, out-patient, acute care, convalescent unit and long-stay care. The training period is from 12 to 24 months, and the lessons learnt from the two systems are outlined. The two schemes will serve as a model for future developments and improve progress in this area of health care.

751. CHAPPUIS, Ch. Die Abteilung Geriatrie-Rehabilitation im Zieglerspital Bern. **[Geriatric Rehabilitation Department, Ziegler Hospital, Berne.]** *Hospitalis*, Zürich, 1977, Jan., vol. 47, no. 1, pp. 8-9.

The geriatric rehabilitation department of the Ziegler Hospital, Berne, has four wards,

three with 16 beds and one with 12. There are 12 single, 16 double and eight four-bed rooms. The physiotherapy and ergotherapy units also serve the hospital's other departments. The aims of the department are as follows: (i) the treatment and rehabilitation of acutely ill elderly people or those needing continuing care but who have not acute complications; (ii) advising and counselling; (iii) the training of all staff active in geriatric care; (iv) publication of reports on experience gained, with particular emphasis on practical medicine; and (v) education of the public on the care of the elderly. The term 'chronic sick', with its connotation of 'a passive, incapacitated object of care; a hopeless case with no prospect of improvement or progress' has no place in the department's vocabulary. The second phase of the project will provide a day hospital and 44-bed 'after-care' ward where patients awaiting discharge, but not needing full care, can continue their rehabilitation. These two units will relieve the pressure on beds.

752. MARTIN, A. and MILLARD, P. H. **Effect of size on the function of three day hospitals: the case for the small unit.** *Journal of the American Geriatrics Society*, New York, 1976, Nov., vol. 24, no. 11, pp. 506-510.

The work loads of three day hospitals in Britain attached to active departments of geriatric medicine were studied over a one-year period. A difference in functional efficiency of the three units was noted. None of the units was purpose-built, the smallest had 12 places with a staff/patient ratio of 1:3.3; together with the 15-place unit with a staff/patient ratio of 1:2.2, it provided effective short-term rehabilitation. The 28-place unit with a staff ratio of 1:3.3 was not able to provide effective short-term rehabilitation. Size appeared to be the major factor in the success or failure of a given unit. The study throws doubts upon the wisdom of a policy of building large day hospitals with all their accompanying problems of staffing and transport. The total attendance for each of the units together with length of stay and major medical diagnosis was analysed in all three units. An effective unit for out-patient rehabilitation can be provided with 10 to 15 places per day if the staff members are chiefly remedial therapists. On the basis of the daily attendances of the patients studied the district's needs for rehabilitation would have been met by 0.5, and 0.4 places per 1,000 of the population aged 65 years or over respectively. However, this would not have been sufficient to satisfy the requirement for out-patient investigation and medical treatment on a day basis.

753. ROBINSON, W. **Experiment in geriatric care.** *Nursing Mirror*, Sutton, 1977, Jan. 20, vol. 144, no. 3, pp. 39-41.

South Western Hospital, Stockwell, London, has established a geriatric day unit which combines the best aspects of a hospital and a day centre. The joint venture in day care between the hospital and local authority provides special facilities for elderly patients in a purpose-built geriatric day unit. The unit accommodates up to 60 patients each day and cost £175,000 to build and equip. Special financial arrangements have been made to cover the cost of running the centre. One-third of the cost of heating, lighting, food and domestic services is provided by the local authority, who also provide a social activities organizer responsible for the social activities and diversional therapy. The hospital pays for two-thirds of the heating, lighting, food and domestic services, finances all the medical provision as well as the nurses' salaries. The unit is an example of joint planning between the hospital and the community and creates a new form of care for the elderly, encourages administrative co-operation, and provides vocational training schemes for medical and nursing staff in the hospital and the community.

CARDIOLOGY

See Abstract Nos. 727, 732, 737

UROLOGY

See Abstract Nos. 624, 734, 738

SURGERY

See also Abstract Nos. 672, 738

754. **Comparison of hospitals with regard to outcomes of surgery.** *Health Services Research*, Chicago, 1976, vol. 11, no. 2, pp. 112-127.

Two studies of variation in post-surgical death and morbidity in short-stay hospitals in the United States are discussed. Professional Activity Study data were used to compute indirectly standardized mortality ratios for 314,000 patients in 14 surgical categories from 1,224 hospitals, and in the second study ratios were calculated for 8,593 patients in 15 surgical categories for 17 hospitals. Comparisons of the results from the two methods increases confidence in the methods and results. The results indicate that substantial variation in outcome among hospitals does exist, independent of differences in patient mix. Moderate expansion of abstract information could provide a basis for continuing assessment of outcome and to supplement local quality assurance schemes.

MATERNITY

755. KÄSER, O. Rooming-in in der Frauenklinik des Kantonsspitals Basel. **['Rooming-in' in the maternity department of Basel Cantonal Hospital.]** *Veska*, Aarau, 1977, Jan., vol. 41, no. 41, pp. 34-35.

Although the maternity department of Basel Cantonal Hospital was not planned for rooming-in it has been possible to adapt patients' rooms for this purpose. Six-bed rooms have become three- or four-bed to allow for the extra equipment: there are also single and double rooms. The mother takes over much of the care of her child during the day, the nurse assuming an instructional and advisory role which she finds satisfying. The father is allowed to be present during delivery and one hour each evening (from 1845 to 1945) is reserved for his visiting alone: during this visit the nurse keeps out of the way so that the family can begin to lead its own life.

DERMATOLOGY

See Abstract No. 691

DENTISTRY

756. RIDLEY, D. R. **Orthodontics in the North of Scotland 1956-1976.** *British Dental Journal*, London, 1977, Jan. 4, vol. 142, no. 1, pp. 21-23.

The development of specialist orthodontic services in the North of Scotland and

Western Isles over the last 20 years is discussed. The main orthodontic centre has been established at Raigmore Hospital, Inverness, and the new out-patient department comprises a double surgery for orthodontic work, together with a conventional surgery, office, model storage accommodation and X-ray room. The development of a peripheral service of clinics at Nairn, Dingwall, Golspie, Wick, Fort William, Broadford and Stornaway began in 1956 and this service has now been extended to the Southern Isles of the Outer Hebredies. Equipment has been gradually installed in these clinics and now a full range of treatment can be provided. Increase in demand for treatment has led to an expansion in the number of professional staff. The problems of travelling are discussed, with the effects of the influx of summer visitors on the health services. The work is now being divided and further expanded with the reorganization of the National Health Service.

PSYCHIATRY

See also Abstract Nos. 622, 626-629, 660, 746, 747

757. MANNING, N. P. **What happened to the therapeutic community.** In: The year book of social policy in Britain 1975, edited by Kathleen Jones and Sally Baldwin, pp. 141-156. London, Routledge and Kegan Paul, 1976. £9.50

The theory of the therapeutic community and its development are outlined and some problems arising from it are discussed. The falling psychiatric hospital population, increasing stress on community care as an alternative, and the growth of psychiatric beds in district general hospitals resulted in a fall in interest in therapeutic communities, though its use has been extended to forms of residential care other than psychiatric hospitals. Early partisans felt that the therapeutic community was a panacea. Now that it has more limited, but more realistic aims, it will continue to play a modest role in the field of residential institutions through its special experience of individual and social process.

758. TONGEREN, G. J. van. De toekomst van het psychiatrisch centrum. **[The future of the psychiatric centre.]** *Ziekenhuis*, Utrecht, 1977, Jan. 19, vol. 7, no. 2, pp. 54-58.

Changes, both functional and organizational, are taking place in the provision of psychiatric care. This paper discusses five models for the future development of the psychiatric centres, considering possible expansion as well as contraction of their functions: (i) total model, based on regional integration of all institutions and services providing prevention, treatment, rehabilitation and after-care for psychiatric patients, thus bringing medical and social psychiatric care into one co-ordinated organization; (ii) comprehensive clinical model, which gradually differs from model (i) and is based on increasing co-ordination of ambulatory care; (iii) stabilization model, based on stabilization of the existing organizations (with expanding psychiatric care as a social phenomenon this does not seem a likely development); (iv) limited clinical model, based on limiting admissions to psychiatric centres by improving prevention and after-care, ambulatory treatment, home care, long-term hostels and nursing homes; and (v) liquidation model, which is an extenuation of model (iv), based on the assumption that improved specialized provision for psycho-social and psychiatric problems will replace the need for psychiatric centres. The advantages and disadvantages of each

model are discussed at length, but no conclusions are drawn as to the likely direction of future development.

759. HOWELL, R. G. **Introducing a patient information system at a psychiatric hospital.** *Hospital and Health Services Review*, London, 1977, Jan., vol. 73, no. 1, pp. 10-12.

A pilot study was carried out of all patients of the consultant resident at Hellingly Hospital, Hailsham, Sussex, to test the feasibility of interrupting the flow of the HM1R (Psych 1/P) data from psychiatric hospitals to the Department of Health and Social Security in order to produce up-to-date information that could be used to improve patient care facilities. The main principle of the system is that it should not provide information that could be obtained from an individual patient's case notes. This constraint is necessary to ensure confidentiality and to provide patient managers with information that otherwise would not be available to them. Analysis of the data is discussed. The four main reasons derived from the pilot study are: (i) it is better to start with a small system collecting simple data rather than to set up a complex system with the risk that the system may never become efficiently established; (ii) the future emphasis of a local psychiatric information system should not concentrate exclusively on in-patients; (iii) the advantages of a remote computer will only be realized if several hospitals within a region are included in the system; and (iv) it is necessary to appoint one person to be in charge of the system. The study demonstrates that it is possible to set up an inexpensive system to provide local managers with information on their patients for improving facilities.

760. BARRY, T. M. **Safety and environmental factors in accreditation of facilities.** *Hospital and Community Psychiatry*, Washington, 1976, Nov., vol. 27, no. 11, pp. 796-799.

The standards developed in 1972 by the Accreditation Council for Psychiatric Facilities of the Joint Commission on Accreditation of Hospitals cover 28 components of psychiatric treatment schemes including the environment and personal safety, governing body and management, medical staff, medical records and treatment. The standards relating to the environment and patient safety are discussed and the difficulties which psychiatric hospitals face in complying with them are outlined. The standards are intended to promote a greater concern for safety and the environment and serve to improve the quality of patient care.

761. MARRIOTT, P. F., GRIGOR, J. M. G. and HIEP, A. **Reducing hospital re-admission rates among schizophrenics.** *Medical Journal of Australia*, Glebe, 1976, Dec. 11, vol. ii, no. 24, pp. 897-898.

The Modecate Clinic, Royal Park Psychiatric Hospital, Victoria, provides a comprehensive long-term follow-up service for patients with chronic psychiatric problems, usually schizophrenia. The performance of the clinic as a full-time unit is evaluated in terms of: (i) alterations in readmission rates; and (ii) the length of in-patient stay during relapse. A mirror-image study using patients as their own controls was carried out. The results demonstrated the highly significant differences in admissions to hospital before and after administration of a depot phenothiazine and highlight the need for vigorous and determined out-patient follow-up. The costs of a clinic are still small

when compared with the costs of readmission to hospital. Subgroups of poor drug responders, sex differences, variations in side effects and frequency of administration of the depot drug require further evaluation.

762. SHANNON, P. J. **Coercion and compulsory hospitalization: some patients' attitudes.** *Medical Journal of Australia*, Glebe, 1976, Nov. 20, vol. ii, no. 21, pp. 798-800.

Patients' attitudes upon admission to Larundel Psychiatric Hospital, Melbourne, were elicited. Only patients who had not been admitted previously and could communicate their feelings were included in the study. The results indicated that negative feelings were expressed more often by those who felt coerced into hospital and those admitted compulsorily. Those patients who did not feel coerced expected that the nurses would be helpful, that there would be treatment for them, that they were in the right place for treatment and that they required treatment. Reasons for the negative attitudes are discussed together with suggestions as to how admission procedures could be improved.

763. LAKE, C. **The design of security units: nursing considerations.** *Hospital Engineering*, London, 1976, Dec., vol. 30, pp. 4-5.

The role of a security unit is discussed. Some of the most serious problems within the psychiatric field have been in acquiring suitable placements for the more difficult and behaviourly disturbed patient. The ultimate aim is to provide as comprehensive a psychiatric service as possible with special hospitals, regional secure units, psychiatric hospitals and community care. The 'open door' regime has placed greater pressure on the special hospitals and there is now a danger of too great a reduction in the amount of security a patient requires. The type of security required is discussed, together with the attitude of staff towards the management problems which may be encountered. The need for adequate secure provision within the National Health Service is a challenge which must be met by all in the profession.

764. JAN, L.-J. **Influence of relatives on the length of hospital stay.** *Social Work*, Albany, 1977, Jan., vol. 22, no. 1, pp. 60-61.

Growing concern about the length of stay in hospitals for psychiatric patients has resulted in an increasing interest in improving facilities for their early release. Hospital environmental conditions and demographic variables have been related to the length of stay. A study of 170 non-criminal patients in a Florida hospital assessed demographic variables, frequency of relatives' visits, frequency of leaves of absence, ratio of frequency of visits and length of stay. The results indicated that length of stay and ratio of frequency of visits were related. The more frequently psychiatric patients are visited or taken home the shorter will be their stay in hospital. Visits may be seen as an indication of the relatives' positive interest in the patient. Social workers should encourage relatives to visit patients as one way of shortening the period in hospital.

765. NATIONAL ASSOCIATION FOR MENTAL HEALTH. **Home from hospital. MIND 1976 campaign: progress and results.** London, National Association for Mental Health, 1977, 26pp.

The MIND Home from Hospital Campaign was launched at the end of April 1976

with the aim of increasing the amount of accommodation in the community for former psychiatric patients. This report provides an account of the campaign, with as assessment of the achievements over the first 10 months and an appraisal of future developments.

766. GOLDSTEIN, S. E. and CARSLON, S. **Evolution of an active psychogeriatric day hospital.** *Canadian Medical Association Journal*, Ottawa, 1976, Nov. 6, vol. 115, no. 9, pp. 874-876.

A geriatric day hospital was established as part of the psychogeriatric unit of the Royal Ottawa Hospital, Ont. The day hospital is part of a short-term assessment and treatment unit, the average in-patient stay is 26 days with an emphasis on short-term rehabilitation. Initially the unit was integrated with day hospital programmes of other units, but it became apparent that a separate facility was desirable. The philosophy of the geriatric day hospital is outlined. Patients attend two or three times a week. The activities of the psychogeriatric day hospital are integrated with those of the geriatric in-patient unit since it is advantageous for in-patients and day hospital patients to share the same facilities. The majority of day hospital patients come from the in-patient unit and almost all have affective disorders. The training schemes provided by the day hospital are discussed; the emphasis is upon reintegration into the community. During the first year there were 75 patients in the scheme—only three were admitted to the in-patient unit and one was readmitted after discharge.

AUTHOR INDEX

Acheson, R. M. 737
Ackerman, R. E. 627
Adams, R. C. 721
Adelstein, S. J. 732
Allen, J. D. 721
Andersen, R. 677
Anderson, S. E. 628
Atherton, S. O. 713
Ayliffe, G. A. J. 691
Barry, T. M. 760
Bhanumathi, P. P. 659
Billadello, J. 711
Birtwhistle, E. H. 745
Bissett, E. M. 650
Boam, T. V. 647
Bonnici, B. 641
Brand, L. A. G. 744
British Standards Institution 640, 689
Brown, M. 664
Burrell, C. J. 642
Campbell, D. 708
Carr, A. J. 652
Carslon, S. 766
Chappuis, C. 751
Clarke, M. 655
Clément, J.-M. 615
Cox, A. G. 672
Cribbs, W. 704
Crofton, E. C. 706, 709, 710
Danes, M. 615
Darby, D. R. 688
Dartington, T. 653
Decker, C. 614
Dowling, W. L. 667
Duffus, A. J. 648
Eckel, F. M. 722
Eresian, J. G. 676
Erler, H. 690
Feldstein, M. 668
Frankel, M. 677
Fraser, D. H. 706
Freye, E. 723
Garnett, W. R. 722
Garrett, R. D. 679
Gatherer, A. 740
Gebert, A. J. 678
Germaine, A. 649
Gibbs, J. R. 639
Gilby, A. M. 745
Gluck, L. 748
Goldacre, M. J. 740
Goldstein, S. E. 766
Good, L. R. 628
Graham, J. 650
Grigor, J. M. G. 761
Gsell, O. R. 736
Gugliermetti, F. 631
Gwaltney, J. M. 705
Hannay, D. G. 725
Hardaway, R. T. 624
Harper, J. F. 661
Havard, J. D. J. 646
Hawthorne, V. M. 710
Heda, S. S. 719
Hedley, A. J. 710
Herrler, M. 700
Hiep, A. 761
Hillhouse, A. J. 706
Hladik, W. B. 727
Holmgren, J. H. 682
House, V. G. 656
Housley, C. 681
Howell, R. G. 759
Hoyt, C. E. 711
Hunt, E. J. 665
Hurtig, W. E. 628
Isermann, H. 718
Izumi, K. 626
Jan, L.-J. 764
Jansen, A. P. 730
Jepsen, O. B. 699
Joint Commission on Accreditation of Hospitals 675
Jorgensen, T. 617
Jung, A. L. 713
Käser, O. 755
Kaslow, R. A. 692
Kasper, J. 677
Kirkby, R. J. 658
Kramer, D. 729
Krass, M. E. 743
Kruse, F. H. A. M. 657
Lake, C. 763
Lalande, A. C. 619
Lange, S. 700
Largiadèr, F. 738
Laria, R. 733
Laufman, H. 702
Levenstein, A. 663
Levy, E. 629
Levy, J. V. 723
Libow, L. S. 750
Mackel, D. C. 692
McManus, W. J. 662
McNerney, W. J. 714
Mallison, G. F. 692
Manning, N. P. 757
Mano, P. 615
Marks, I. M. 660
Marquis, K. H. 739
Marquis, M. S. 739
Marriott, P. F. 761
Martin, A. 752
Means, G. C. 627
Mein, P. 617
Melia, K. M. 735
Merritt, G. J. 722
Meshelany, C. 680
Meyers, A. J. 745
Michaelsen, G. S. 704
Millard, P. H. 752
Mills, J. 742
Mills, W. A. 746
Munson, F. C. 719
Murray, L. 654
Nationaal Ziekenhuisinstituut 613
National Association for Mental Health 765
Nelson, J. P. 703
Neuhaus, W. A. 633
Newhouse, J. P. 739
Ney, P. G. 746
Nielsen, H. C. 713
Nurse, G. 653
Obst-Czayka, H. 718
O'Donnell, D. J. 720
Ohler, 611
Oppenauer, E. 634
Pahl, G. 685
Passoni, M. 643
Philps, R. M. 716
Pryke, M. M. 661
Quattrucci, J. 701
Rae, A. 638
Ridley, D. R. 756
Riley, T. V. 696
Riskin, W. G. 741
Robinson, W. 753
Rock, R. B. 680
Roland, P. 707
Rothman, S. 669
Rousé, M. 630
Rupp, C. A. 728
Sande, M. A. 705
Sanderson, C. 737
Sather, M. R. 726
Scanagatta, A. 674
Schaede, P. 686
Schäfer, H. 687
Scheid, W.-M. 635, 636
Scrimger, J. 632
Shannon, P. J. 762
Shapin, P. G. 724
Sheeley, D. R. 666
Sheffield, R. 749
Sherman, H. 666
Shortell, S. M. 664
Slay, L. E. 741
Smith, N. 648
Smith, R. M. 638
Snydman, D. R. 693
Sørensen, V. D. 670
Stamm, W. E. 698
Stocker, J. 651
Suratt, P. M. 705
Swarbrick, P. J. 712
Taylor, J. D. 673

Teoh-Chan, C. H. 694
Tinne, J. E. 695
Title, I. 724
Tomalin, C. 747
Tongeren, G. J. van 758
Toornend, R. A. 616
Tornar, R. M. 734
Ulrich, J. A. 704
Vignau, Y. 641
Waard, J. M. de 684
Weber, C. E. 726
Wedeen, M. M. 645
Weill, E. 612
Weinstein, R. A. 697
Wheeler, K. E. 717
White, S. J. 727
Whitehead, C. 622
Wilson, M. 653
Wishart, M. M. 696
Wood, S. D. 671
Wooldridge, M. G. 683
Zimmer, R. O. 688

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